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ART. I. *Observations on Delirium Tremens, or the Delirium of Drunkards, with Cases.* By Dr. STEPHEN BROWN, late Resident Surgeon of the New-York Alms-House.

PERSONS who indulge excessively in the use of ardent spirits, are occasionally attacked with delirium, which, together with its accompanying symptoms, has been called by Dr. Armstrong, the "Brain Fever of drunkenness."* It is called by Dr. Sutton, "*delirium tremens*," doubtless from a peculiar symptom, which frequently attends this disease. This complaint has also been called *mania à temulentia*, *mania à potu*, *febris temulenta*, &c.

The serious nature, and frequent occurrence of this disorder, and the want of any system on the subject, render it one of peculiar interest. Its character is liable to be mistaken, and confounded with other diseases, particularly with phrenitis and mania, and a course of treatment pursued which would tend directly to fatal consequences. It occasionally terminates fatally, and this result is, doubtless, sometimes owing to a pernicious mode of treatment. The nature of this curious and interesting malady is, perhaps, far from being well understood, as appears from the variety of treatment proposed for its cure, by different practitioners. During a

* Illustrations of Typhus Fever, by J. Armstrong, M. D.

connection of five years, with the medical department of the Almshouse of New-York, we had the opportunity of witnessing a very considerable number of cases of this affection. Having had our attention very particularly attracted to this singular disease, we are induced to give a short history of its symptoms as they have occurred to us, and a concise detail of several cases, the object of which is, to show the safety and efficacy of opium in its cure, when liberally and judiciously employed. We would also beg leave to make some observations upon other means which are resorted to in the treatment of this disease. The symptoms attending the early stage are indigestion, oppression at the pit of the stomach, nausea, and sometimes retching and vomiting; the bowels sometimes relaxed, in other cases constipated, sometimes pain or uneasiness in the head. The tongue is furred, but generally moist, pulse variable, generally more frequent than natural, skin in some instances dry and hot, but usually moist, and of a natural temperature. There is commonly a trembling of the hands, and occasionally of the tongue and neck. There is always a wildness and quickness of look, with an expression of anxiety. The mind becomes deranged, more particularly through the night. The patient cannot sleep, has no disposition to lie down, and frequently it is with great difficulty that he can be induced to go to bed; when in bed appears restless, and in a short time, unless confined by force, will get up and put on his clothes, walk the room, manifest great anxiety about his affairs, or the safety of his person; and if prevailed upon to lie down a second time, will soon be up again, and thus alternately go to bed and rise, perhaps twenty times or more through the course of the night.

As the disease progresses, the delirium becomes constant both night and day, with incessant watchfulness, and the expression of the countenance varies according to the impressions most predominant in the mind. In some instances they imagine they see some disgusting and loathsome animal in the room; as rats, mice, or snakes, which they suppose are come to do injury to their persons or property. Occasionally they imagine they see some frightful object, as the devil, who, they suppose, has come to take them; which occasions almost insupportable fright, manifested by a violent trembling of the whole system, expression of fear and horror in the countenance, and anxious cries for help. Sometimes they fancy that they hear remarkable noises in the room, or at a dis-

tance; and occasionally they alternately sing, pray, and rehearse passages of scripture.

These patients have a strong desire to be engaged in business; or, their minds are wholly engrossed with fears or dangers of some kind. They are tractable, if soothingly dealt with, and rarely manifest any thing of malignity or ill-nature; they, however, will not quietly bear close confinement, and will frequently attempt to force themselves from the restraints of their attendants; they rarely complain of any bodily pain. When their acquaintances come in their presence, they generally know them; but sometimes in the height of their delirium, they do not recognise their nearest relations and friends. When the patient is in some degree still, he will be constantly occupied in picking at the bed clothes, and with various motions of the hands; frequently, as if catching at some object which he fancies to be floating in the atmosphere around him. In the advanced state of the paroxysm, he is in an unremitting state of watchfulness; trembling of the hands much increased; perspiration breaks out upon slight exercise; the pulse becomes very rapid, debility great, and unless he becomes alleviated by falling into a quiet and sound sleep, symptoms indicating the approach of dissolution soon make their appearance. The evacuations are passed involuntarily; the skin becomes cool and clammy, sometimes covered with a profuse sweat; pulse excessively rapid and feeble; countenance dull. These symptoms are either followed by convulsions which soon terminate the existence of the unhappy victim; or insensibility succeeds, partaking of coma or apoplexy, and ending in death.

The following Cases presented most of the preceding symptoms, except those described as occurring at the approach of dissolution.

In March 1817, I was called to visit Mr. R——, a man about forty years of age. When I entered the room, he spoke to me as politely as usual. I asked him several questions respecting the news of the day, which he attempted to answer, but appeared agitated:—his eyes looked wild—he kept standing, and could not be prevailed upon to be seated. He soon pointed across the room, looking very earnestly, saying to his son, “Don’t you see them? don’t you see them? there they are again!” I asked him what it was he saw? He answered, *mice*, which had come to eat his library;

said they had already greased and spoiled his most valuable books, and that he had sustained one hundred dollars damage by them. This notion appeared constantly to harass his mind, although no circumstance of the kind had taken place. His wife informed me that he had been thus deranged four days, during which time he had not slept at all, neither could he be kept in bed. That during the night, to use her own words, "he carried on in such a manner as to frighten them, and they had to call in the neighbours for assistance to manage him." I knew this man had been addicted to a free use of spirituous drink for two years; and his wife now informed me, that for some months past, he had drunk more freely than formerly, and that hardly a day passed but that he had been intoxicated, till within a few days previous to this affection taking place, when, apparently from a sense of the pernicious effect this course had upon his constitution, he suddenly abstained from its use, declaring, he "would never again drink any thing stronger than cider or beer." This affection followed this sudden abstinence from his accustomed stimulus. He appeared free from fever, his pulse being nearly natural in point of frequency and fulness. He had his bowels opened by a dose of calomel and jalap. The next day (the first I saw him) I opened a vein in the arm, and drew off fourteen ounces of blood; directed a blister between the shoulders, and as he had not slept any during the last four days, and there appeared no objections to the use of laudanum, I left a quantity, with directions that he should take a common tea spoonful towards evening; and if sleep did not take place in one hour, to give half a tea spoonful more, and the same quantity again within one hour from that, if necessary; which was done according to my directions. He took two drachms of fresh prepared laudanum before it had the desired effect. I visited him the day following, when I found him in a quiet sleep. He awoke soon after I entered the room, complaining of the blister, and desired to have it dressed: his eyes were somewhat wild, though less so than yesterday, and he talked more rationally. The blister being dressed, he soon fell asleep again, and continued in bed sleeping the most of the time till the following morning, when he appeared as rational and composed as ever; debility and the soreness of the blister were all he complained of. He however soon recovered from both, and observing a more temperate course of living, has ever since enjoyed good health.

L. S. a girl of ill fame, aged 25 years, and who had been much addicted to an intemperate use of ardent spirits, was admitted a patient into the Alms-house hospital, September 1817, affected with delirium tremens. She continued in this state three days; wakeful at night, manifesting erroneous judgment in regard to familiar circumstances around, talking incoherently, wildness and redness of the eyes, cool clammy skin, feeble pulse, trembling. Laudanum was administered to her in such doses as to procure sleep, which, when it took place, continued for the greater part of thirty-six hours. She then became composed and rational, and within a few days was discharged cured.

Mr. G——, a man aged 48 years, was admitted a patient in the hospital of the Alms-house, in December 1817. He was taken up in the city late in the night, in a state of intoxication, by the watchman, and conveyed to the watch-house. The day following he was sent to Bridewell. But his hands being frozen, he was carried to the Alms-House a day or two after, by order of the commissioners. When brought into the hospital, was affected with delirium tremens. Had trembling of the hands, wildness of the eyes, wakefulness through the night, frequently getting in and out of bed, walking the room, talking incoherently, singing, very much disturbing the other patients; is free from fever, tongue moist, skin cool. During the day he was more rational, would frequently ask for spirits, saying he had been long accustomed to its use, even to the quantity of two or three quarts per day. I allowed him a moderate quantity, and at night ordered an anodyne of two drachms of laudanum.

On visiting him the next morning, I found that he had slept none, had been worse through the night, and when complaints were made of his conduct and disturbance in the room, would deny the facts alleged against him, apparently as though he did not recollect them. Continued his spirits in moderate quantity the second day, and at night increased his laudanum to *three drachms*. This had no better effect than the former dose; he was more outrageous than the night previous. In the morning had a little dozing or imperfect sleep.

The third night I increased his laudanum to four drachms. This quantity produced very little sleep. The fourth day discontinued his spirits, and at night gave him the same quantity of laudanum

as the evening before. The next morning found he had not slept, but had been worse than ever. I now resolved to venture upon larger doses, and toward the evening of the fifth day, directed six drachms of laudanum to be given him, and after a lapse of one hour, two drachms more, if the first did not produce sleep. Accordingly, one ounce of fresh prepared laudanum was given him in two doses, at an interval of one hour. This quantity had the effect of producing sleep, which continued through the night, the most of the next day, and the following night. After this he was perfectly rational, and soon after recovered his health, except that his hands were sore for a length of time, from the effect of frost.

Antonio F——, aged about 30 or 35, was admitted in the Alms-house, August 26, 1818. He was a pauper there during a part of the previous winter, and took his discharge from the institution in the spring. While he was under examination by the superintendant, was not recognised as having previously been in the institution, and from his appearance was judged "insane." My opinion was requested. I at once recollected his person, but observed his countenance changed from its former appearance. His eyes were wild and sparkling, he spoke hastily and in a fluttering tone, and was hasty in all his movements, with tremor of the hands; would sometimes answer questions correctly, but occasionally talk at random.

He was put into a warm bath, had a clean suit of clothes put upon him, and sent to a room occupied by healthy persons. Some time during the afternoon, I was requested to see this man, being told that "he was raving." Upon entering the room, I found him fallen upon his knees, as if to pray. When he saw me, he cried out with a trembling and very anxious tone of voice, with a countenance expressing the greatest terror and anxiety, and begged that I would pray for him, saying that the devil had come for him, that he then saw him, and pointed to a particular part of the room where he was. He not only asked me, but every one that came in his presence, to pray for him. His whole system, at this time, was in a high degree of tremor.

I thought I would treat his hallucination as real, and accordingly took a cudgel as if to chase the devil out of the room, and made towards his *Satanic Majesty* with great violence. He acknowledged that

the devil had fled from me, but that he had gone to a bottle standing in a remote corner of the room. The bottle was then directed to be removed. He still looked toward the place with trembling anxiety, as if fearing he would return. I directed a bible to be given him. He seized it eagerly, and asked if it was a catholic bible, (he was a Hollander, and of the catholic persuasion;) being assured it was, he appeared more composed. I told him I would give him some drops to take which would prevent the devil from touching him. He said he wished I would. I directed a drachm of laudanum to be given him once an hour, until four should be taken, unless sleep should soon supervene. This quantity was administered to him, but it produced no sleep. He was more composed about the devil coming for him, but to use the words of the nurse, "he was ranging all night." The next day he appeared more composed, although his delirium continued. The following night had the same quantity of laudanum as the evening previous. He slept well through the night and the following day, after which he became perfectly sane. He was now allowed a moderate quantity of his accustomed stimulus until his strength was restored.

M. V. a man aged 40, had been accustomed to a free use of ardent spirits for several years. In August 1821, he became affected with delirium tremens, when I was requested to see him. He had a dry hot skin, full pulse and more frequent than natural, tongue lightly coated with a white fur, pains in the head, tremor of the hands, muscles of the neck and tongue, wildness of the eyes with delirium. His delirium commenced the day previous to my seeing him. He was a man of robust habit, and as there was a considerable febrile action in the system, with a strong pulse, I opened a vein in the arm, and drew off twenty ounces of blood, ordered a blister between his shoulders, and a saline cathartic to be taken in the afternoon.

Upon visiting him on the second day, found his skin more pleasant, pulse softer, but his delirium continued;—had slept none during the preceding night. I would have now bled him, but was opposed by the friends. Ordered blisters to the extremities, and nauseating doses of tart. antim.

Third day.—Skin moist, pulse softer, delirium continues, tremor increased, has had no sleep. Ordered a cathartic of jalap

and calomel, after the operation of which, a tea spoonful of laudanum every hour till he should fall asleep.

Fourth day.—Has a moist skin, pulse not so strong, delirium worse, has had no sleep. The laudanum was given to the quantity of three drachms, when the friends became alarmed; thought it made him worse, and ceased to give him any more; requires constant attendance; does not at times recognise his most intimate friends. He continued in this state of delirium until the seventh day from the time I first saw him, during the three last days of which, from the fears of the friends, he had taken very little medicine, except one cathartic. His delirium is now worse than ever, tremor increased, pulse feeble, skin cool and clammy, has not slept half an hour for the last seven days. The patience of the friends now became almost exhausted, and they consented to give any thing I thought proper. I now directed the following composition:

R. Gum. Opii. gr. 36.

Pulv. Rad. Ipecac. gr. 36.

Sup. Carb. Sodæ, gr. 36.

Rub intimately together, and divide in twelve powders.

One of these powders was directed to be given every hour until he should fall asleep.

My directions were complied with until ten of the powders were given, when his wife, who was attending upon him, being fatigued and impatient from constant watching, resolved, as she said, "either to kill or cure him," gave the remaining two at one dose. Soon after this he vomited a small quantity. He then fell asleep, and continued sleeping for the greater part of twenty-four hours. His delirium now had entirely subsided, his tremor much abated. He required no more medicine after this, and in a few days went to his daily labour, and has since been as well as formerly.

The following cases were furnished me by my friend and colleague, Dr I. I. Howe, who, during a connection with the medical department of the Alms-house, of three or four years, had frequent opportunities of seeing cases of this disorder.

Catherine Cafield, a middle-aged woman, was admitted into the hospital at Bellevue, on the 28th November, 1817, labouring under great debility from a long fit of drunkenness. She said she had

been drunk a month; during the day she exhibited no signs of insanity, but raved the whole night. She was allowed a small quantity of a strong tincture of serpentaria, with a drachm of laudanum in the evening. This treatment was continued for two or three days successively with no sensible alteration in her symptoms. She slept none. She then took in the course of the afternoon and evening, in divided doses $\bar{3}$ ss. of laudanum, after which she slept quietly all night, and appeared better in the morning.

The practice of giving a full anodyne at night, in cases similar to the above, has been for some time pursued in this institution with very satisfactory success. The patients have never relapsed into a state of delirium, after one night of sound sleep procured by the use of *opium*.

December 5th.—Rested well last night without an anodyne.

Dec. 6.—Good sleep last night, seems nearly restored to usual health, with no return of delirium.

Hughes, aged about 40, an habitual drunkard, was admitted in May 1818, in a state of great debility and mania from intemperance. His tongue was foul; breath peculiarly offensive; had universal tremors; total loss of appetite, and *no sleep*. He was in a state of the most raving delirium. For three or four days little was done for him, and he grew worse. We then had given him in the evening half an ounce of tinct. opii, yet *slept none*; next day quite as much deranged as before. In the evening, the tinct. opii was repeated in rather larger quantity, say five or six drachms. He slept quietly all night, and was perfectly rational in the morning. Infusion of serpentaria Virg. was the only other remedy employed in this case. The patient recovered, but was for some time very feeble.

M. R——, aged 28 years, born in Ireland, was admitted November 17th, 1818, in a state of the most entire delirium, from intemperance. He was continually muttering, but spoke not an intelligible or articulate word. Had a constant tremor of the whole body, and but a partial command of the voluntary muscles. Picked at the bed-clothes and other objects about him. His tongue was dry and brown, and he was unable to thrust it out between his teeth. Pulse rapid, small and feeble. He would swallow any liquid which was put into his mouth; but was unable to swallow any thing in a

solid form. He was put upon the use of sub. mur. hydrargyri gr. j. camphor. gr. x. once in two hours, with a strong infusion of serpentaria Virg. to be given freely as his common drink.

During the first and second nights of his admission, he slept none, was wild all night, tried to rise, but could not stand.

3d day, evening.—Having continued the above remedies without any apparent change, he took half an ounce of tinct. opii, at one dose. About an hour and a half after taking this, he fell asleep.

4th day, morning.—He slept quietly the whole night, and did not wake till late this morning, when I found him calm, and in some measure restored to his recollection. He complained of vertigo and some headach. His mouth had become moist, and the tremor had nearly left him.

Ordered tinct. cinchonæ \mathfrak{z} ss. once in three hours, and the medicines first prescribed to be continued. He continued sane during the day, and took some food.

5th day.—Countenance composed, and eyes cleared up; slept well without an anodyne, and says he has a good appetite. Complains of very little pain of head, and some soreness of his flesh. Has none of the tremor, is sane, pulse natural; admits that he had a drunken frolic immediately previous to his illness; mouth affected by the calomel.

Directed the powders to be omitted—tincture and infusion to be continued.

6th day.—Continues as yesterday. Remedies continued as yesterday, with the addition of carb. ammonia gr. vi. once in two hours.

7th day.—Continues improving; pulse full and soft; complains of pains in his hands and feet. He says, that previous to coming into the hospital, he was bled profusely, (he supposed two quarts).

Let the remedies be continued.

Dec. 8th, 21st day.—He is now so far recovered as to walk about the ward; appetite good. His feet were very tender for several days, after he had in other respects considerably recovered, so that he was unable to walk or stand upon them.

We now propose to make a few observations upon the different means employed by practitioners in the treatment of the delirium of drunkards, and to conclude with a few pathological remarks.

BLOOD-LETTING.—The lancet has its advocates in this disease. Some practitioners suppose that a free use of the lancet, is as

essential in most cases of delirium tremens, as in phrenitis, and employ it indiscriminately in every stage, and under any condition of the patient. They are doubtless led to this practice from the supposition that the brain is the seat of the disorder, and that its proximate cause depends either upon inflammation of the membranes of this organ, or upon a venous congestion in the vessels of the brain and its membranes. The maniacal state of the patient they suppose to depend upon some injury of this kind; and they consider blood-letting the surest and the principal means, for its relief. And, doubtless, many miserable wretches have been hurried to the grave by a too free and indiscriminate use of the lancet, when a more judicious management might have restored them to health.

Among those who have given an opinion to the public respecting the best method of treating this disease, we do not know of a greater advocate for the lancet than professor Potter of Baltimore.* He remarks that, "in young subjects, and even in patients advanced in life, but recently attacked, we have frequently bled to the amount of seventy or eighty ounces, and several times, an hundred in three or four days. Although (generally) small portions only can be, with propriety, taken away at once, in the collapsed state which almost always succeeds to the abuse of every form of alcohol, there are some exceptions to this rule. The menacing character of the symptoms in the first stage, either in the form of long continued convulsions, sometimes indicating approaching apoplexy, or the presence of a ferocious delirium, have impelled us to draw twenty or thirty ounces of blood, without removing the ligature from the arm. We grant that this is seldom necessary, and not often admissable; but we have never had occasion to regret so sanguinary a procedure. We have drawn at a simple bleeding from the arm, all the intermediate portions, from forty ounces to one ounce, by cupping or leeching, and with the happiest effect. In several unpromising cases, local bleedings have surpassed our expectations, long after it was deemed prudent to bleed from the arm." He again remarks, there "are certain conditions of the patient, in which blood-letting is no longer admissable."

Dr. Armstrong attended forty-two cases of this disease, seven

* See Armstrong's illustrations of typhus fever, with notes critical and explanatory, by Nathaniel Potter, M. D. &c.

of which proved fatal. In debilitated and habitual drunkards, he "invariably saw blood-letting prejudicial, even at the onset." On the contrary, he says, "in constitutions that have not been shaken by reiterated drunkenness, I have known early and moderate venesection of much use, especially when followed by active aperients." "Yet, I am fully persuaded, that there are not many instances where the lancet is really requisite ; and also, there are few where purgatives should be omitted in the commencement."

Our experience constrains us to coincide in opinion with Dr. Armstrong, in regard to the use of the lancet in this disease ; that there are not many instances where it is absolutely necessary ; that it should be restricted to the early stage of the affection, and to habits where the stamina is not impaired by a long practice of intemperance. Even in cases where convulsions come on early, *emetics* will generally have a more decided and happy effect than the abstraction of large quantities of blood. We have occasionally bled in *robust habits*, even after three or four days continuance of the delirium. Then, after evacuating the stomach and bowels, if circumstances appeared to require it, we have given opium in such doses as to procure a quiet sleep of several hours.

PURGATIVES.—In regard to the use of purgatives in this "fever," Dr. Potter observes, that "although the necessity of a soluble state of the intestines is obvious in almost every condition of fever, it would appear from repeated observation, that cathartics are not to be ranked among the radical means in the treatment of the fever ; and, indeed, they are but feeble auxiliaries, except in such cases as are attended with, and fomented by, some vitiated secretion. We are aware that this is often the case, as the liver is more involved in the morbid action than any organ except the brain, both primarily and secondarily."

In robust subjects who had been addicted only to occasional intoxication, Dr. Armstrong prescribed purgatives more liberally during the first two or three days in particular, than in habituated and enfeebled drunkards. In the latter, he thought that opium might be given with advantage at an early period, but not in the former, until the bowels had been "freely and frequently evacuated." He thought it proper, even in *habitual* drunkards, to open the bowels in the beginning of the disease, before he gave opium ; and in *occasional* drunkards, "purgatives must be employed not only at the onset, but during the progress of the dis-

temper." This last remark, however, seems not to coincide with the commencement of the succeeding paragraph, where he says, "in occasional as well as in habitual drunkards, purgatives must be *limited* to the early periods of the disease; because they are most pernicious in the advanced stages, to which opium and calomel are most suitable; the one to allay irritation, and the other to equalize the circulation."

During the early stage of the disease, in strong and robust habits, pretty free purging is safe, and to a certain degree useful. But, observation inclines us to the opinion of professor Potter, with regard to the utility of purgatives, that they are not to be ranked among the radical means in its treatment. And, even in the description of cases mentioned above, in which only he thought them useful, emetics would, doubtless, be much more effectual, especially in promoting a more healthy action of the liver. In habitual drunkards, and in advanced stages of the disorder, purgatives, if given at all, should be very mild, as rhubarb and magnesia, ol. ricini, &c. In the latter, when there is much debility, with a feeble pulse and cold clammy skin, enemata would be more safe and proper. But, we cannot believe that purging is necessary in *all*, perhaps not in the generality of cases, even though other evacuations by blood-letting or vomiting should not be premised. This should be decided upon by a strict inquiry as to the state of the patient's bowels. In some of the cases which we have given, neither purging nor any other evacuation preceded the use of opium, and yet the cure was speedy and complete.

TEPID AFFUSION.—This is one of the means generally employed by Dr. Armstrong, in the treatment of the "fever of drunkards." It was the next step after the bowels had been evacuated as much as he thought proper. Two or three gallons of tepid water, strongly impregnated with salt, were "dashed over the whole skin," which was then immediately dried, and "well rubbed with warm flannels." The patient was then put to bed, and forty or fifty drops of the tinct. opii administered in a little warm wine, and repeated every two or three hours until the patient should fall asleep. "This treatment," says the doctor, "will occasionally restore the patient without any other means; but as, in a large majority of cases, it only alleviates the symptoms, it will generally be necessary to follow it up with repeated doses of calomel and opium, which, together with the use of the tepid affusions, will rarely fail."

COLD AFFUSION.—The cold affusion was employed by Dr. Armstrong, in several cases, with decided benefit. This practice, it seems, was first suggested to him by Dr. Ramsay, of New-Castle-upon-Tyne, who had frequently employed it with much benefit in the early stages of this complaint, when the “surface of the body was covered with sweat.” Dr. Gregson, of Sunderland, had also been in the habit of using it occasionally, in the early stages of this disorder.

The first patient on whom Dr. Armstrong tried the cold affusion was an “athletic young man, who had lately drunk very hard, and who had been ill a few days.” The doctor says, “about three gallons of cold salt-water were dashed forcibly over his naked body, while he was in a state of profuse perspiration. Before the employment of this measure, he had been extremely furious; but after it he became quite tractable, went to bed, and had some tolerably quiet sleep. The symptoms returned on the following day, and the cold affusion was again applied, with the same result as before; and, from this period the recovery was rapid; nor was any other means used, except an occasional opiate and purgative, with a little wine and light nutritious soup.” His second case in which the cold affusions were used, was also a strong young man, in whom it proved equally decisive and efficacious.

Dr. Armstrong never ventured upon the use of the cold affusion, except in those cases where there was much apparent vigour of constitution; and he always gave warm wine and water immediately before and after their application, and had the skin dried and rubbed well with warm flannels, “by way of supporting the *vis vitæ*, and ensuring sufficient reaction.”

EMETICS.—The efficacy of emetics in this affection, has been attested by different practitioners. The first volume of the Medical Recorder, contains a paper by Dr. Joseph Klapp, one of the physicians to the Philadelphia Alms-house Infirmary, in which the author introduces his theory of this curious disease. In support of it, he has transcribed some facts from a case of “*mania à temulentia*,” described in his “communication on that disease, in the 7th vol. of the Eclectic Repertory,” and also, facts from some other cases of the same nature. The paper here referred to, we have never seen; but, from the purport of the one to which we have alluded, and the remarks of some other practitioners who become acquainted with Dr. Klapp’s method of treating this

complaint, we are led to believe that his principal dependence is in emetics. In support of Dr. Klapp's plan of treating "temulent diseases," the reader is referred to the Medical Recorder, vol. i. ; to a case of mania à potu, by John Eberle, M. D. ; to a case related in the same, by Joseph G. Nancrede, M. D. ; to vol. ii. of the same journal ; to a paper, by Daniel Drake, M. D., of Cincinnati, Ohio, in a letter to Samuel Brown, M. D., Philadelphia ; also, in the same, to the detail of a case of "mania à temulentia," by Dr. Gilbert Flagler of Philadelphia, with remarks, and a case by the editor.

Although it has not been our practice to depend exclusively upon emetics in the treatment of delirium tremens, we can bear testimony to the utility, in some cases, of premising an emetic to the use of opium. And, no doubt, this is often an important step in the treatment of this disease. For the patient is frequently at the commencement affected with a loathing of food and oppression at the pit of the stomach ; which is followed by retching or vomiting. An emetic, under such circumstances, would remove the morbid accumulations in this organ, and excite the liver to the secretion of a more healthy bile ; hence a source of irritation to the stomach and nervous system, now labouring under a high degree of irritability, from the disease and its remote causes, would be removed.

Although, perhaps, in most cases of delirium tremens, emetics, given in ordinary doses, will excite vomiting ; yet, in some instances, the stomach is in so torpid and inactive a state, that it requires large doses of medicine to produce this effect. We once witnessed a case of this kind, where thirty grains of tartarized antimony were given in divided doses, in a short time. It excited no vomiting whatever, but operated powerfully upon the bowels. This man died within three or four days afterwards. He was of somewhat a robust habit, and athletic appearance, and when the emetic was given, was in a confirmed state of delirium tremens. Nothing could be learned of his previous history. He appeared timid, and his mind wholly bent upon spiritual apprehensions. Whenever any one came in his presence, he would accost him with the epithet of "*devil, incarnate devil*;" or, if a female, "*mother of Satan*;" and would often request them to depart from his presence. He would frequently fall upon his knees in the attitude of prayer, and attempt to pray. When

his medicine was offered to him, he would refuse it; and it became necessary, at first, to force the medicine into his mouth, and compel him to swallow it. When offered the second dose in a cup, being told that if he did not take it voluntarily it should be forced down him as the first, after considerable hesitation, he made signs, (for he would not speak when requested,) that if the cup was placed on the floor he would take it; which being done, he went to it, kneeled down, and with uplifted hands prayed that "since he was compelled to drink that poison, it might do him no injury." He then drank it, went into his bed, and appeared unusually silent for some time. After praying he would frequently sing, and occasionally make metre. The following couplet is a specimen of the effusions of his deranged imagination:

"And thou makest devils fly

"Through earth, through hell, through heaven and sky."

In the expression of his eye and countenance was depicted the greatest degree of horror I ever beheld. He had been addicted of late to intemperance, to which, perhaps, he had been led to indulge, from some severe exercise of the mind.

Dr. Klapp gave one of his patients 20 grains of tartarized antimony before it excited free vomiting, and in two days after, when he thought proper to repeat the emetic with the same patient, it required 16 grains to produce the desired effect. The patient soon after recovered.

OPIUM.—The well known properties of this highly important and useful medicine, of allaying inordinate action, and inducing sleep, has led to its use in this frequently obstinate and dangerous affection. And from the complete success resulting from the decisive effects of this article, in some instances, many practitioners have been led to its frequent employment, either alone or combined with other means. But notwithstanding opium *alone* has, in some instances, been found capable of controlling the diseased action, of inducing quiet sleep, and restoring the patient to health, yet from its failure in other instances, and its frequent injurious effects, *especially* when injudiciously administered, many have been induced to view it, in the generality of cases at least, not only of *doubtful efficacy* during every stage of the disease, but tending to *injurious consequences*. But it is an important inquiry, whether the discredit it has obtained in the opinion of some practitioners, and the partial and limited repute attached to it by others, may not be frequently,

perhaps generally, owing to its being given in too small quantities. This opinion appears to be supported by the result of a very considerable number of cases, in which opium was almost exclusively depended upon, and in various stages of the disorder, with decisive and complete success. In some cases, it required much larger quantities than in others, to produce the same effect. This depends upon different constitutions, and the habits of different individuals. It requires a larger dose of this drug to produce its specific effects upon a confirmed drunkard, long accustomed to a free use of ardent spirits, than upon persons less habituated to the use of stimuli; and persons whose habits are perfectly temperate, and who rarely and sparingly partake of the "inebriating draught" are brought under its influence by less quantities than the latter. And native constitution presents a difference with regard to the quantities and effects of opium, independently of any particular habits of individuals. Generally, when given in too small a dose, under any circumstances, it is apt to produce disturbed sleep and other disagreeable consequences, when a larger portion would induce an alleviation of pain, and sound, quiet sleep. In some habits, small quantities will produce a relief from pain, and composed sleep, while larger quantities, with the same persons, would give rise to vertigo and delirium. In other habits, it would require proportionally much larger doses to produce similar effects.

And it must be acknowledged, that there are some constitutions, with whom opium appears not to agree in any dose or form. But such, perhaps, are comparatively few.

In the delirium of drunkards, therefore, before the administration of opium in any quantity, the habits of the patient should be particularly inquired into, as well as the symptoms and circumstances of his present condition. In one of the cases we have related, an ounce of the tincture was administered in two doses, with an interval of only one hour. This, perhaps, is more than practitioners in general would have ventured to give in this disease, without a precedent; especially after the failure of such large doses as had been given the two evenings preceding. But consider the former habits of this man: he had been long accustomed to a very free use of ardent spirits. For some considerable time previous to his being carried to Bridewell, he had frequently drunk "two and three quarts of rum" in one day. Is it a matter of surprise then, that the stomach and nervous system, long ac-

customed to the action of such enormous quantities of powerful stimuli, should require proportionably a large dose of laudanum to produce effects we should reasonably expect from much smaller quantities in persons under different circumstances? And is it a matter of astonishment that this quantity may be taken with as much safety by one of such habits, as an half of a drachm by a man who is temperate? It had the effect of bringing on quiet and sound sleep, of allaying the tremor, of rendering the pulse fuller, slower, and softer, and of breaking that chain of morbid action which constituted the disease. His recovery was rapid; and during a residence in the institution of four months afterwards, he enjoyed good health. The great and leading object in the treatment of delirium tremens is, to procure sleep. If a quiet and sound sleep of from twelve to twenty-four hours can be obtained, the patient almost universally convalesces from that time, and rarely ever manifests any appearance of delirium afterwards. And whenever, under our observation, opium has produced this effect, a further use of it has seldom been necessary with the same patient.

Dr. Armstrong is an advocate for opium in the treatment of this disease; but he generally gives it combined with calomel, after preparing the patient, according to symptoms, by occasional bleeding, and generally purging, and then tepid affusions, "about forty or fifty drops of the tincture exhibited in a little warm wine, and repeated at the interval of two or three hours, provided sleep be not in the mean time procured." This treatment he found *occasionally* succeed without any other means; but he remarks, "as in a large majority of cases it only alleviates the symptoms, it will generally be necessary to follow it up with calomel and opium, which together with the use of tepid affusions, will rarely fail. Two or three grains of calomel, with a grain and a half of opium, every six or eight hours, will be sufficient doses of these medicines on the first day of their administration; and after that period it will commonly be better to lessen the quantity of the opium." And thus he continued the calomel until it manifested its action on the gums or salivary glands.

We cannot commend Dr. Armstrong's partiality to calomel in this affection. It appears rational to suppose that, had he been a little more bold in the use of opium, he would have succeeded with the most (perhaps all) of his cases, in which calomel was used with success; and the cure might have been accomplished in much less

time, and, doubtless, with much more safety to the constitution of his patients. Mercury is much too frequently resorted to, and indiscriminately used, to control many of the maladies of the human body, which would yield to milder and safer means. For it not unfrequently of itself produces incurable affections, especially in particular constitutions. And there is no condition of habit more unfavourable to its operation, and in which it tends to greater injury, than in those accustomed to the free use of distilled and fermented liquors. As it was Dr. Armstrong's practice to use the tepid affusions from two to four times per day during the treatment, which he always found quieted the patient, and rendered the pulse fuller and slower, and was frequently followed by sleep, we cannot but believe that in the generality of his cases, this process, together with the opium, produced the very favourable effects which he attributed, in a great degree at least, to *calomel*. For it would doubtless require less quantities of opium to produce sleep in this affection, when aided by the influence of tepid affusions upon the system, than without them. He gave calomel to "equalize the circulation." What "equalized" the circulation, in the successful cases we have related, and others of a similar nature, where calomel was not given, except occasionally as a purgative combined with jalap? Opium has been found, when resorted to after previous evacuations as symptoms seemed to require, almost uniformly successful. The fatal cases have been those brought to the Alms-house in the last stages of the disease, when, perhaps, no treatment could have saved them.

Dr. Armstrong gives the following cautions in regard to the use of opium in this disease. "However efficacious opium may be under judicious management, I have seen and heard enough to be fully convinced, that it is a very perilous practice to administer it in too large and repeated doses, since apoplexy, coma, or convulsions, may be thereby produced." This celebrated author had attended forty-two cases of "the brain fever of drunkenness," of which seven proved fatal. Whether any of his failures were owing to the too free use of opium, he does not say. That this drug may be given in such quantities as to produce "apoplexy, coma, or convulsions," no one will deny; and that the disorder in question is frequently attended, especially in the last stage, with *similar symptoms*, is equally certain. If the judicious author had any facts in relation to this point, it would have been a subject of import-

ance had he communicated them. As it stands, his caution affords very little instruction. As it cannot be previously determined what quantities will be required to produce sleep, it should be given in moderate doses at such intervals, as that the effects of each succeeding, shall co-operate with the preceding one. Our practice has been generally to give the *tincture*, as its operation is quicker, and generally at an interval of one hour. When given in substance it may be *long* in the stomach before its effects are perceptible. Perhaps to this circumstance is owing the unfavourable opinion relative to opium among some practitioners in the treatment of this complaint. It may not be useless here to advert, in support of the decisive and good effects of opium in *delirium tremens*, to a paper by Walter Channing, M. D. published in the eighth volume of the *New England Journal*. The author there gives a short history of seven cases treated by himself, four of which proved fatal. It appears, however, that opium was not fairly tried, except in the seventh case. This was a man of about thirty-five years of age; large, and of an athletic and remarkably healthy appearance. He was first attacked with convulsions from eating some indigestible food, to relieve which, his stomach and bowels were freely evacuated, which succeeded. Two days after, being requested to see him, found he had not slept for the two last nights, and was now in a state of "genuine *delirium tremens*." He was put upon the use of calomel and opium, agreeable to the plan of Dr. Sutton. The second day he had slept none. In the evening he gave him five grains of opium, and in two hours after, directed the same quantity to be repeated. This quantity produced no sleep, and the next morning the patient was "decidedly worse." He now gave him six grains, and in two hours six grains more. This had the effect of producing calmness and sleep. About this time, his gums became affected with the calomel; but the author remarks, "although I am far from believing that the calomel in this case was entirely useless, I have no doubt that the cure was decidedly the effect of the opium, especially of the last two full doses, in which twelve grains were taken in two hours." The author then makes the following judicious observation. "I would also add, that from what has come under my notice in other and fatal cases, I have a strong conviction that this patient would have soon died, had not sleep been obtained." He closes his valuable paper by stating that he had recently conversed with a respectable prac-

tioner of that town, who had seen many cases of delirium tremens, who "informed him that he had been in the habit of trusting them to opium *alone*, and with almost uniform success."

PATHOLOGY.—The precise nature of this peculiar disease does not appear to be perfectly understood. Autopsic examinations have thrown but little light on the subject. Dr. Armstrong made examinations after death, in two cases only. He found slight congestions in the brain and liver, but the other viscera appeared natural. In the few cases of dissection we have witnessed, similar appearances have been noticed, together with some other organic derangement, particularly of the liver, which must have been produced by a habit of intemperance, and appeared to have no necessary connexion with the proximate cause of this complaint.

In the pathological investigation of this curious malady, it is important first to inquire, whether any particular organic or local derangement, is *exclusively*, or in any degree, essential to its production or existence? If so, how far this local affection is connected with any particular state of the system generally in its formation? *A priori*, it is reasonable to suppose, that if any organic derangement is in *whole* or *part* concerned in its cause, such morbid affection must exist in *every case*. Because the principal remote cause is always the same, and some of the most characteristic symptoms are generally, if not always, present. Tremor is very general; delirium and wakefulness are striking characteristics of the complaint, and always exist. Convulsions, which sometimes occur, may, and doubtless do, frequently arise from incidental causes, which have no necessary connexion in producing the other symptoms. We here refer to convulsions which occur early in the disease, or sometimes during the progress, and not those which come on at the approach of dissolution. For this symptom, together with coma and apoplexy, which are generally attendant on the last stage, may be the result of organic peculiarities *consequent* to this disorder. Which of the great organs then of the system is affected? The brain, liver, lungs, stomach or bowels? Is it a part or all of these, which being morbidly deranged, cause the disease in question? and in what does the derangement consist? In the two cases examined by Dr. Armstrong, slight congestions were found in the *brain* and *liver*, while the other *viscera* were natural. These congestions were venous, and appear to have been the natural *consequence*, and not a *cause* of the disease. The existence of nervous

irritation through the progress of the disease; the rapid and feeble circulation in the advanced stages, and particularly at the approach of dissolution, tend to produce venous congestion in the viscera, and its existence in the brain will account, in a great measure, for the occurrence of coma or apoplexy, which so frequently attend the last stage. If this affection existed in the first instance, the natural consequence would more probably have been similar to an effusion or extravasation; viz: stupor, coma, apoplexy, &c. But the reverse is the case in delirium tremens. The patient has no disposition to lie down, and cannot sleep. Although his perceptions are frequently erroneous, his mind is more active than in health. Dr. Armstrong remarks, that "it seems to be accompanied with partial congestions of the brain and liver, from which, together with nervous irritation, it perhaps derives most of its peculiar characters." This gentleman probably formed his speculation of venous congestion in this complaint previous to his employment of mercury, which he considered important to restore the equilibrium of the circulation.

Professor Potter remarks, that "in *some* cases the cerebral is clearly symptomatic of the hepatic affection, and, therefore, the disease will never be eradicated without the interposition of mercury." That the liver is very frequently affected in the delirium of drunkards, as well as in many other conditions of intemperate habits, will not be denied. If the hepatic *sometimes* causes the cerebral affection, why not always? And the supposition that the watchfulness and delirium are caused by any known affection of the liver, is not supported by analogical facts in pathological deductions.

Dr. Klapp appears to have some notions of a "gastric pathology," and that irritants of different kinds might produce this affection, especially in habits predisposed to it. Apparently with a view to support this theory, he introduces some facts of convalescents from this complaint, having relapsed upon taking some indigestible food, and being again restored by the administration of emetics, and removing the offending substance from the stomach. But that delirium tremens cannot be accounted for by the operation of irritating substances in the stomach merely, is supported by the fact, that laudanum, which neither pukes nor purges, has frequently been known to cure confirmed cases of this disease, without the aid of any evacuants whatever. Dr. Klapp's patients, perhaps, were

not fairly convalescent; they, perhaps, had not obtained that long and quiet sleep, which is a solution of this disorder. And instead of accounting for the good effects of emetics by their evacuant quality merely, it should not be forgotten that they produce a powerful impression upon the brain and nervous system.

Having said thus much, we would venture to propose the following queries:

Does not the delirium of drunkards consist in a peculiar morbid action of the brain and nervous system, brought on by that state of collapse which follows a long course of the action of powerful stimuli? Can the effects of opium, readily and completely curing this disease in many instances, be satisfactorily explained upon the supposition of any visceral organic derangement? Can the sudden and decisive effects of the cold effusions, be accounted for upon such a view of the subject?

May not the good effects of emetics, which, although they evacuate unhealthy secretions and other substances from the stomach, that may possibly have some effect in keeping up and aggravating the disease, be attributed to their effect upon the circulation, and some peculiar impression upon the brain and nerves?

At the same time there may exist with this affection various degrees of disorder in the lungs, stomach, and bowels, and particularly in the liver, which may require a variety of treatment to meet them. Hence the lancet is not only sometimes useful, but even essential. And no doubt, in some constitutions, where the liver is peculiarly affected, mercury is clearly indicated to restore this organ to a more healthy state. In some cases, emetics are more particularly serviceable than in others; as where the liver and stomach are disposed to a morbid secretion. Emetics have the effect of changing the action of these organs, as well as of removing irritating substances.

The seton, unless when employed to promote the cure of fistulous ulcers or sinuses, is only a variety of issue in its action and effects. The use of setons is as old as the tenth century. It was a familiar practice in the time of Rhazes, the Arabian. Albucasis describes them as established by the actual cautery; and this was the exclusive practice down to the fifteenth century. Hollerius, who flourished early in that century, was probably the first who made the seton, as it is now done, with an unheated needle.

The Greek physicians employed caustic issues in a considerable number of diseases. Hippocrates resorted to them in gout; in sciatica; in chronic affections of the lungs, liver, and spleen; and in scrofulous affections of the joints.

It appears from the works of Ætius, who died in the middle of the fifth century, that the later Greeks extended their use to several other diseases. This writer states, from Archigenes, their utility in palsy; and proposes to make an issue by either the actual or potential cautery in several places; one on the back of the neck below the occiput, two on each side of that, and several on the head. And he adds, that if the ulcers are kept running a good while, he would not doubt of a perfect recovery. In asthma, he lays great stress on this remedy, and used it in an extensive way, applying the caustic in no less than twelve or fifteen different parts of the thorax. In the case of the bite of a mad dog, he advises the cautery, and directs the ulcers to be kept open forty or sixty days.

The illustrious Roman author, Aurelius Cornelius Celsus, who flourished about the year seventeen, and may be considered as contemporary with Christ, recommends caustic issues in diseases of the joints, and epilepsy and phthisis. He always used the hot iron.*

Celsus does not appear to have distinguished between gouty and scrofulous affections of the joints: but in all inveterate pains of the hip and knee, he represents the cautery as the most efficacious measure.

In treating *De Coxarum morbis et curationibus*, he has these words:—*Ultimum est, et in veteribus quoque morbis efficacissi-*

* In the time of this admired writer, who appears to have been an accomplished surgeon, the Roman wives and children must have become less easily terrified by hot irons and the knife, than they were two centuries and a half before, when Arcagathus, a Greek, was banished from their city for his readiness to make use of them.

raum, tribus aut quatuor locis super coxam, cutim candentibus ferramentis exulcerare. And his next short chapter De Genuum doloribus et cura, ends with—Omnes autem ejusmodi dolores, ubi invetaraverunt, vix citra ustionem finiunt.

In his chapter De Hydropico morbo, when mustard has ulcerated the skin, Celsus recommends the hot iron thus :

Ferramentisque candentibus pluribus locis venter exulcerandus est, et servanda ulcera diutius. The belly is to be seared in many places with hot instruments, to keep the ulcers longer open.

Towards the close of the chapter De comiti alis morbi, he advises issues to be made by his favourite means on, and below the occiput.

Under the head De Tabe, he has what he calls three species, atrophica, cachexia, and phthisis. When, in phthisis, the symptoms at night become more vehement, and neither the fever nor the cough are quieted by the remedies already directed, there is, he says, need of stronger help ; and proceeds,

Exulcerandus est ferro candenti, uno loco submento, altero in gutture, duobus ad mamarum utramque ; item sub imis ossibus scapularum : and he forbids the ulcers to be healed until the cough terminates and the cure is effected.

The Arabians extended this practice to a greater number of diseases, than either the earlier or later Greeks and Romans. Rhazes employed the caustic issue, conducted as a seton, in affections of the eyes, ears, and teeth : and Albucasis made issues by caustic, in the common way, in fifty different diseases. Indeed, the measure retained its importance as long as Galen and the Arabian writers were consulted as guides in medicine and surgery.

But as the *chemical* gained an ascendancy over the *Galenical* methods of cure ; and antimony, mercury, and other active substances, found their way from the laboratory to the sick chamber, this safe remedy became less frequently employed. In some countries it was gradually and entirely laid aside, or only instituted on some rare occasion by a surgical practitioner, who, from attachment to ancient reading had become acquainted with its value. In some parts of Europe, it maintained its ground till the beginning of the sixteenth century. Arculanus employed issues very rationally for the prevention of the plague ; and his example was followed by several physicians of the succeeding age, who recommended them as one of the most effectual measures. This experience of the fif-

teenth century is supported by observations made of late years, and in our own country. It has been remarked that the yellow fever and other malignant epidemic diseases, rarely or never attack those afflicted with inveterate ulcers.

During the seventeenth and eighteenth centuries, the seton was, I believe, more frequently employed than what we strictly denominate the issue. When the latter was chosen, it was usually made by incision, and the sore kept open by peas. This variation of practice became so universal, that the use of caustic for the purpose of creating issues almost ceased to be known. We have, however, a few distinguished examples of a preference of the caustic. This method was prescribed by Boerhaave and De Haen for the scrofulous disease of the hip: and Cheston recommended it for the white swelling in the knee. Mr. Pott also has used a caustic application in treating the incurvated spine.

The seton, which Mr. Pott sometimes used, is, he says, a painful and nasty thing: besides which, it frequently wears through the skin, before the end for which it was made can be accomplished. Of issues made by incision, he remarks, that, "if large enough for the intended purpose, they are apt to become inflamed, and to be very troublesome before they come to suppuration. But openings made by a caustic are not, in general, liable to any of these inconveniences, at least not so frequently, nor in the same degree, neither are they so troublesome to make or to maintain."

Late in the eighteenth century, Mr. Ford of London, published an excellent work on the disease of the hip joint, and other scrofulous complaints; which has had the effect of recalling the attention of many surgeons to this remedy in similar cases. He gives the most striking evidence in its favour. When the affection is in a part remote from the surface, he is convinced of its superiority over blistering, however managed: and he is induced from his experience to prefer it to the seton, as being more certainly effectual in removing the disease.

I shall now proceed to give a sketch of my own experience of caustic issues in a variety of diseases.

In many cases of *venereal bubo*,* I have had recourse to this remedy, with very satisfactory results. When the inguinal affection

* A paper published by Dr. Cutbush, (See Barton's Med. and Phys. Journal,) led me to make trial of the caustic in cases of bubo.

has been neglected until the suppurative stage is approaching, or when mercurial friction, aided by purging, fails to make an impression on the tumour, an eschar on its apex, treated as an issue, has generally succeeded in preventing suppuration of the affected glands. When this measure has been employed at an earlier period, in conjunction with mercurial friction around the base of the tumour, the treatment has never failed.

In phthisis pulmonalis, I have sometimes depended on caustic issues as a primary remedy; and at others, I have employed them as an auxiliary in every stage of the disease. In a very alarming case of six months standing, with purulent expectoration, and frequent small hæmoptoe, I trusted to a large caustic issue on the sternum inter mammas, and the internal use of a combination of the gum resin ammoniacum and squill. The patient, though greatly emaciated when I first saw her, was restored to her usual plumpness in about three months. The expectorant mixture was continued only about three weeks. She has for several months enjoyed perfect health.

Almost four years ago, I had a case of phthisis of still more unpromising aspect, which I treated successfully by the same remedies.

The patient, Mrs. B——, was removed from a remote part of the city to comfortable lodgings in the vicinity of my residence, for the purpose of living more immediately under my direction. At the time of her removal, she was so feeble as to require to be carried up stairs. On my first visit, which was a few hours after her removal, the rapid pulse, and other hectic symptoms, the frequent and constrained state of respiration, and the appearance of the expectorated matter, impressed me with utter hopelessness. Accordingly I declined proposing any remedy. But being sent for again, and entreated by her friends to make an effort to mitigate her distress, while they evidently believed that nothing more could be expected from any human art, I made a *caustic eschar* on the sternum *inter mammas*, and prescribed the mixture of *ammoniac and squill*. In six weeks from the commencement of this treatment, Mrs. B. was not only able to walk about the apartments, but regularly took her seat at the family table, and appeared to suffer scarcely a vestige of disease. From this issue a very copious discharge was maintained for about three months, at the end of which time, she con-

ceived herself restored to health as perfect as she had ever enjoyed. No *symptom* of disease remained.

These cases of phthisis are selected from among several in which I have witnessed the utility of the caustic. In chronic affections of the breast, this remedy is less troublesome, less painful, gives a more permanent caustic irritation, and appears to me much more efficacious than blistering, however managed. So strongly am I impressed with this sentiment, that for several years, I have trusted no case of the kind to any course of remedies, without the aid of that under consideration. In chronic catarrh, I have found it of singular utility.

In chronic hepatitis and other morbid states of the liver, I have also employed this remedy with very manifest advantage. The torpor, and other deranged conditions of that viscus, induced by frequent ebriety, are uniformly relieved by the occurrence of a diseased state of the skin, as gutta rosacea, herpetic eruptions, and leprous desquamations. A caustic issue has the same effect; and it possesses the advantage of being easily established at any time, and easily healed.

The utility of the measure in obvious hepatic disorders, induced me to give it a trial in a few cases of dyspepsia and hypochondriasis, two of the most obstinate diseases to which the human system is subject. An issue at the scrobiculis cordis in the former, and on the right hypochondrium in the latter, was of useful influence while in action; but whether the effects were permanent, I have had no opportunity of determining.

In chronic indurations and enlargements of the viscera induced by protracted febrile diseases or by intemperance, a large issue over the seat of the affection has, on some occasions, resolved the disease in a short period of time. What would be the effect of this remedy employed extensively, at an early period of schirrhous of the womb?

In *marasmus*, connected with a scrofulous state of the omentum or other internal parts, I have found benefit from small issues on the abdomen. I was induced in the first instances to try issues in this case not only from the analogy of their usefulness in the scrofulous affections, but also from observing that the skin is always remarkably sound and free from eruption in the subjects of *marasmus*.

I have also employed caustic issues in a few cases of that formidable disease, the scrofula of the hip joint. A perfect cure was established in three out of five cases, which were the only ones that

have ever come under my immediate management. The other two cases had been of some years duration before I was consulted: and from the improper suggestions of friends, the parents of the young sufferers became apprehensive that the treatment was improper, and the cases were transferred to the care of other physicians.

The use of caustic issues in the following cases is believed to be a new practice. At least, I am not aware that they have hitherto been used by others in similar derangements of health.

1. *In habits prone to abortion.*—Mrs. F——, of a weak constitution, suffered an abortion some months after marriage. She carried her next burden to the eighth month, when she was safely delivered of a son. Afterwards she had six successive abortions; the event generally occurring some time within the first four months after conception, notwithstanding a variety of judicious efforts to prevent it, directed by an experienced accoucheur. She consulted me in a supposed state of pregnancy. I made a small caustic issue on the inside of each thigh, and directed both to be kept running for at least six months. She advanced to the full period of gestation, and had a second son.

In one other similar case only, have I been permitted to employ the same remedy, and the result was equally satisfactory. The females, in both instances, ascribed their successful gestation to the issues.

2. *In Leucorrhœa.*—Mrs. D——, after bearing her first child, became subject to leucorrhœa in a very severe form. Under the use of remedies, the complaint was mitigated, and occasionally suspended for a short period; but it always recurred from very slight and imperceptible causes. This lady remained barren for many years, during which period she thought it expedient to consult a great number of experienced physicians. In a casual conversation with her husband, I advised caustic issues. They were employed as in the above cases. The leucorrhœa gradually disappeared, new feelings of health were enjoyed, and she became pregnant.

3. *In Menorrhagia.*—M. C——, a courtesan of great beauty, suffered several abortions before she had arrived at the age of nineteen. She consulted me in a state of almost perpetual hæmorrhœa from the uterus. Her lips were not merely pale but white, and her debility so great as to give serious apprehensions of approaching dissolution. She had used, she informed me, various astringents

and tonics ; and had made trial of mercury. The disease was sometimes checked, but never subdued.

I made two issues by caustic, one on each side of the spine, close above the ilium. The bowels were kept open by rhubarb ; and rest and a light nutritious diet, with a little wine, admitted.

The first impression of the caustic seemed to affect the uterine effusion. Whether this was the consequence of painful sensation, or of fear, or of an association between the internal membranes of the womb and the skin, I do not pretend to decide. The effect, however, was obvious in fifteen minutes : and what was of greater moment, it was permanent. The effusion, in less than two weeks, disappeared altogether. The issues were kept running for six months ; during which time, she had four returns of regular and natural menstruation.

This accomplished woman having, during her state of debility and danger, come under the protection of a lady of active benevolence, was restored, not only to health, but to correct moral habits, to virtuous society, and to that tranquil happiness which arises from the respectful consideration of the upright and honourable.

ART. III.—*Some Account of the Small-pox which prevailed at Baltimore during the Winter of 1821-22.* By Dr. HORATIO G. JAMESON, of that place.

It is my intention, in treating of small-pox, briefly to notice some of the most interesting circumstances connected with the different modifications of the disease ; among which we may unhesitatingly place the *varioid*. These circumstances will only be noticed so far as may seem necessary for ascertaining the peculiarities of the *varioid*. I am aware that in writing for a periodical journal we must confine ourselves to narrow limits. I could not, however, do justice to the subject of the *varioid* disease, without availing myself of the aid of the history of small-pox, and it is only so far as I deem necessary for the illustration of *varioid*, that I have sought aid from history.

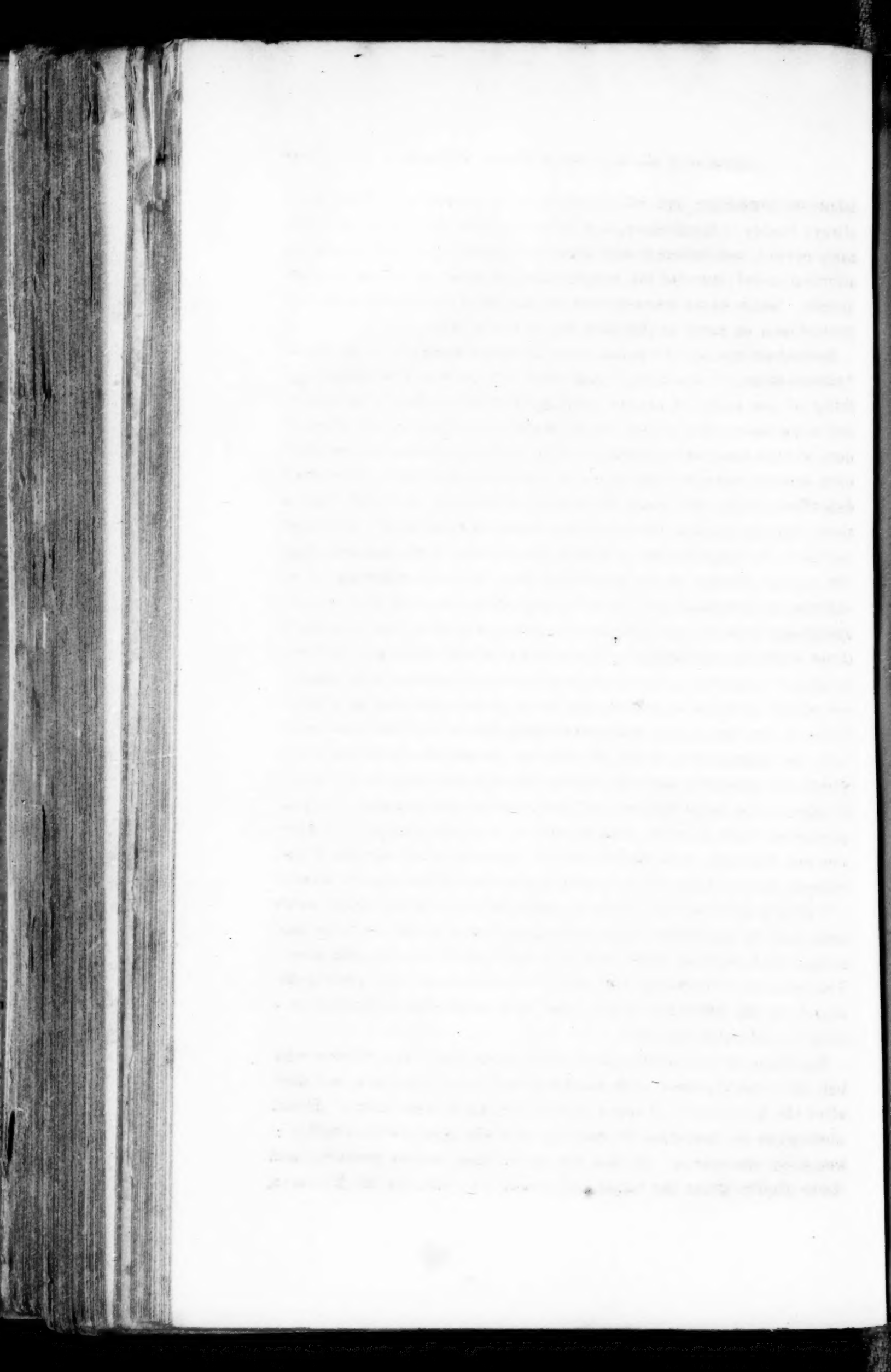
It seems to be a pretty general belief that the disease now pre-

Fig 1.



Fig. 2.





laborious breathing, and other symptoms of prostration. They were always highly inflammatory, and called for free depletion at a very early period, but unless it was employed on the first day, it seldom afforded relief; nor did the employment of other remedies succeed better. Such cases were mostly of the most inveterate kind, and proved fatal so early as the fifth day in many cases.

Sydenham speaks of "pains resembling the stone," "a pleurisy," "rheumatism," "vomiting," and other symptoms. I witnessed nothing of this kind. A severe griping, with or without a looseness, and sometimes with bloody stools, were, according to my observation, always fatal when violent. The striking differences which I have noticed between the present epidemic, and what Sydenham describes under the head of regular small-pox, are sufficient to show that the present disease is not of the regular kind. It would, therefore, be unprofitable to follow him further in his remarks upon the regular disease of the year 1667, &c. But by referring to his account of the small-pox of 1670, and 1674, we shall find several symptoms wherein the present disease agrees with that noticed in those years by this author. In speaking of the small-pox of 1674, he says, "when the pustules were numerous they were very small:"—"where very few appeared, they were of the same size as in other kinds of the small-pox, and were rarely black." This was generally the appearance of the disease, but in severe confluent cases, where the pustules were small over the face and body, there would be seen a few large blisters or bladder-like appearances: in proportion to their number and extent, so was the danger. "They also run through their stages slower than any other species I had hitherto seen." This was universally true during the present season.

"When the eruption came to maturity, they were much more fetid than in any other kind, insomuch, that I could scarcely bear to approach such as were very full, the stench was so offensive." This was so remarkably the case, that every one was greatly annoyed by the offensive smell; the sick were often offensive at a very considerable distance.

Speaking of the small-pox of 1670, Sydenham says, "those who had the fatal bladders with mortification"——"died in a few days after the eruption." I saw a case of this kind in an infant. It had undergone an operation for hair-lip, and was seized with small-pox two days afterwards. It had not more than twenty pustules, and these chiefly about the hands and fore-arms. On the left fore-arm

appeared a pustule which soon run into a large bladder, upon which mortification supervened, and the child died.

Having pursued the examination of symptoms thus far, it may suffice to say, that a disease of such diversity of appearance had never before come to my notice. To give a detailed account of the symptoms, would be to repeat what Sydenham has said respecting the disease, in all the different years in which he notices it. In support of this declaration, I shall detail a few cases, and then present a brief recapitulation of the most usual symptoms. The first case was that of Thompson, a Frenchman, who came from Liverpool on board the Pallas, in the month of August. He landed in perfect health, and remained five days on shore before he sickened with the small-pox. He complained of violent headach, back-ach, nausea, high fever, and some degree of chillness, the eyes red. Second day after his admission, there appeared a fiery eruption much resembling measles. This case was soon found to be a violent confluent disease. The eruption was very fiery throughout the advance of the disease. He was treated three days for malignant fever, which was then prevailing, and died on the fourteenth or fifteenth day of the disease.

A coloured man was attacked with the disease; he suffered the ordinary symptoms with great violence; the pulse being depressed. He died on the fifth day without the aid of a physician.

I saw a young man whose disease was attended with as great a degree of excitement in the blood-vessels as I recollect to have ever seen. It really was well calculated to call forth such an epithet as "ebullition of the blood." The skin was red and hot. Violent headach and back-ach—great thirst. This patient was purged copiously, and lost blood largely twice. The pustules were numerous, but they were of a distinct kind. By the assiduous application of cold milk and water to the face, his eyes, though swelled considerably, never closed up. He remained long delirious at night. The pustules were not tolerably dried away till the end of the third week; and after peeling off, the scabs appeared again and again in his face. Large and numerous biles formed about the end of the third week, and kept up a great degree of secondary fever. This called for frequent purging. Patient recovered.

I was called to a coloured man who had been attacked by violent colicky symptoms, and the usual symptoms of severe small-pox. He drank freely of warm toddy. The consequence of this

was the most complete prostration. The eruptions appeared pale and flat, resembling measles. He was removed to the hospital in a state of the most extreme debility; insensible, cold, and the skin having the appearance as though it had been scalded. A cordial plan of treatment was instituted, but he died in a few hours, I think on the fifth day. This was evidently one of those cases where over stimulation had produced what Dr. Rush has denominated suffocated excitement. That the eruption might thus be prevented from appearing in proper time, and with its proper appearances, by too hot or stimulant a plan of treatment, was well known to Dr. Sydenham.

I saw several cases that came on in the most insidious manner. A young woman of correct habits was vaccinated; on the evening of the eighth day afterwards, I was sent for. She had been complaining all day of headach, sick stomach, chills, &c. but not in any violent degree. I found a miliary eruption scattered thinly over her face, breast, and arms; pulse quite tranquil, no difficulty of respiration; the spaces between the eruption not discoloured. Taking into view all the circumstances of the case; a fine vaccine pustule on the eighth day, all the symptoms very mild; the patient being quite able to sit up, I was induced to believe that it would be a mild case, and that the small-pox, which was then appearing, would be modified by the vaccine disease, which seemed to have advanced regularly. The case turned out quite the reverse; the vaccine pustule from this time remained stationary, and never was surrounded either by the areola or efflorescence. It became one of the worst cases of confluent small-pox I had ever seen, and the patient died.

I saw three cases similar to the one related, that is, where the vaccine disease and small-pox were blended and ended fatally. I also saw some cases in which I had no doubt but the small-pox was modified by the vaccine disease.

To pursue cases further would probably be uninteresting; I shall therefore proceed to give a summary of the most prominent symptoms of this epidemic.

1. There were fewer mild cases than I had observed in any former year.
2. A hot skin and a full share of reaction in the sanguiferous vessels, were in all cases favourable.

3. A cold skin with a depressed pulse, great prostration with colicky symptoms, were always unfavourable.

4. The longer the eruption was delayed in its appearance, the more unfavourable.

5. The more rapidly the pustules filled, the better.

6. The more the eruption partook of the horny or solid appearance, the more favourable.

7. The opposite of this, viz. an appearance of the skin as though it had been scalded or sprinkled over with cantharides, and the whole seeming to be blistered, but divided by irregular lines of depression, were always unfavourable. If to these were joined large bladders, having livid edges, the patients invariably perished.

8. A sore throat was as common and as severe in the distinct, and sometimes in the varioloid, as in the most inveterate cases of the confluent disease.

9. The disease differed from any small-pox I had seen in former years, in having no critical days. This remark applies to all the symptoms belonging to the disease. The eruption appeared from the second to the fifth, mostly on the third or fourth day. Patients died from the fifth to the twenty-first; most I think died on the seventeenth day. The swelling of the face had no fixed period of occurrence.

9. Swellings of the face were, I believe, present in all severe cases, whether the disease was confluent or distinct, but it seldom occurred before the fifteenth day, sometimes later.

10. A salivation was sometimes present in the distinct disease, very seldom in the confluent, under my observation.

11. Neither the swellings nor the salivation gave any evidence of their controlling the disease, or of their being in any respect critical. The swelling may have been salutary, but there was no positive evidence.

12. There was an uncommon disposition in the disease to harass the patients with biles, and repeated crops of extensive scabs. These were as common in severe cases of the distinct as in the confluent disease.

13. There was a most intolerable and insatiate thirst about the turn or middle stage of the disease, in most severe confluent cases, and this was a very unfavourable symptom. I think several patients were lost by indulging therein.

14. The swellings of the extremities were uncommon, and never augured good or ill in any form of the disease, to my apprehension.

15. Delirium was common at night, and I think as much so in the distinct as in the confluent.

16. In some cases the pustules were very large on the legs and feet, both in severe cases of the distinct and confluent. In other cases of both kinds of the disease, there were very few pustules on the feet and legs, and these few did not fill in many cases. I think the latter condition was always unfavourable.

17. Vomiting was not often present, nor were the patients apt to be harassed by nausea in any great degree.

18. In both varieties of the disease, the bowels were confined during the illness, in some cases; in others, they were freely open. I did not observe that any conclusion could be drawn from the existence of either of these extremes. Where there existed severe gripings, with or without purging, few or none recovered.

19. There was an unusual degree of fetor present in all severe cases.

In short, a disease more diversified was probably never met with. In the appearance of the eruption, the time of its appearance; in degree of fever or reaction; time of the most considerable prostration; in the degree or duration of nausea; in regard to a disposition to sweat, (which was uncommon); in respect to thirst, constipation, looseness of the bowels, appetite, apparent soreness of the pustules, closing of the eyes, as to degree or time; extent of chills; temperature of the skin; sore throat; delirium; and, indeed, in regard to all the symptoms, it may be said, they invariably presented something novel in their combinations. Nothing, according to my observations, appeared to be critical in the disease.

From all the observations which I have been able to make, supported by information from my numerous medical friends, more particularly Dr. Mackenzie, there appears to be but one common characteristic of the present epidemic, and that is its inflammatory nature. From this inflammatory condition of the disease arises, I presume, the unpleasant symptom, of ill smell, attributed by Sydenham to a greater than ordinary disposition, in the disease, to putrefaction.

Treatment of the Small-Pox.—I have said in a preceding part of this paper, that the present epidemic is uniformly inflammatory.

This has been the case from its beginning in August to the present time. It is true, some mild cases were met with, but they were comparatively rare, and even in these was a fiery margin and a swelling of the eye-lids and face, in many cases strongly expressive of an inflammatory diathesis. One condition, not clearly noticed by Sydenham, occurred almost invariably in confluent cases, which was that condition of the system termed suffocated excitement, by Dr. Rush.

This state of the system opposed one of the greatest obstacles to every plan of treatment which has been recommended. It bore a near similitude to the first stage of malignant fever; and not an inconsiderable number died on the fifth day. This resemblance was heightened by the fact, that depletion by means of the lancet was seldom attended with any evident advantages after the first or second day.

Sydenham says, "I am certain that success or failure in this disease depends chiefly, if not entirely, on the management of the patient at the beginning." I believe this author could not have said any thing which would apply, with so much propriety, to the reigning epidemic as this sentence. This does not, however, lessen the importance of what he elsewhere says, "that the small-pox, in what manner soever it be treated, will sometimes prove highly confluent." This it behoves the physician to bear in mind; for he who speaks with any confidence about the probable result of cases of small-pox, at the onset, will often find himself greatly disappointed. Nevertheless, I believe, that while the present constitution of the weather continues, there are signs which will not often deceive us. If there be great ardour of the skin, with considerable excitement in the arterial system, we may prognosticate favourably; yet, this state of the system often demands the most energetic antiphlogistic treatment. In all cases of this kind, I evidently obtained advantages from moderate repeated bleedings and repeated cathartics, free dilution with milk and water, thin barley water, and the like.

In the confluent, even where there was a cold skin, great prostration, violent headach, back-ach, sick stomach, and depressed feeble pulse, sometimes not even corded, the patient would appear greatly relieved by a pretty copious bleeding. But notwithstanding this was almost invariably the case, yet I could not with any degree of certainty ascertain afterwards, that any advantages

were gained by this expedient. That it must often have a salutary effect at the beginning of the disease, seems abundantly manifest, from the advantages which are seen more plainly to arise from blood-letting in other diseases, accompanied by a state of suffocated excitement of the system.

Indeed, so evidently does the system partake of the excessive excitement pointed out, that no rational doubt can exist, but that in many cases benefit must result from blood-letting and purging, suited to the peculiar force or degree of inflammatory condition present. But, to lose sight of what must follow in small-pox, viz: the filling of the eruption—the debility—the absorption or dissipation of the matter secreted, and the necessary or consequential secondary fever, and to reduce the patient rapidly, notwithstanding these circumstances, by bleeding or otherwise, would be to plunge them into additional danger.

Upon the whole, I evidently saw advantages arise from bleeding, carefully practised early in the disease. But still, I think, the following remarks made by Sydenham, apply well to the prevailing disease. He says, “nor do I find that bleeding (although it be used early,) does so effectually check the over hasty assimilation of the variolous matter, as cooling the blood by the air received in by breathing, especially if the patient be put to bed immediately after the operation, and heated by hot cordials.” “And I solemnly affirm, that one of the worst cases I ever met with in the confluent small-pox, in which the patient died on the eleventh day, happened in a young woman, soon after her recovery from a rheumatism, by the usual method of copious and repeated bleeding. And from this instance I first learned that bleeding did not contribute so much to keep the small-pox within its true limits, as I heretofore imagined; though I have frequently observed that repeated purging, before the blood is infected, generally renders the subsequent small-pox of a mild and distinct kind.”

The whole of these remarks apply well to the prevailing epidemic. For although I am persuaded, that suitable and timely bleedings generally increased the chance of recovery, still I do not believe that in general the quantity of eruption would be much influenced by the loss of blood, except on the very onset of the disease.

The important advantages arising from purging in the practice of inoculation, affords strong proof of the benefit of “repeated

purging" in the natural disease. And of this truth I was well convinced during the present epidemic. "This disease is never void of danger," says Sydenham, "though the best method and medicines be used in the disease. But it is enough for my purpose to assert, authorized by frequent experience, that whoever refrains from bed in the day-time, in the beginning of the disease, abstains entirely from flesh, and drinks only small liquors, is abundantly safer than he who confines himself immediately in bed, and takes hot cordials." This advice will apply in the treatment of small-pox of every season. And hence, I believe, arose the chief mismanagement of the present disease. The sick of this disease were often treated too much like patients in our ordinary fevers; at least, I am now of the opinion, that this was the case with myself during a great part of the prevalence of the disease. Patients, in this disease, were sometimes bled; took, almost invariably, active cathartics, mostly calomel alone, or combined with some active purgative. But they were mostly left too much in bed, and thereby drove out the eruption. We were too timid in the use of opiates till a very late period of the disease, mistaking a state of vascular excitement, dependent upon irritation, for that of inflammation.

Antimonials, so beneficial in other febrile diseases, were never proper in this; nor did I observe any benefit accruing from spirit nitre, ether, or any diaphoretic or diuretic medicines. And even in allowing free dilution, it was necessary that the drinks should be cool and of the most bland kinds: milk and water, apple-water, barley-water, and the like, were the best drinks.

In order to present the treatment in a condensed and convenient form, the disease may be divided into three stages. 1. The advance of the disease, or the fever preparatory to, and accompanying the eruption, till its completion. 2. That period when the disease may be said to be poisoning between a state of advance or declension. 3. The period of declension, or, more properly, that of the existence of the consequential symptoms.

In combating the symptoms peculiar to the first stage of the disease, we are to bear in mind, that we must prognosticate with extreme caution; and it will always be safer to err on the side of treating cases, which may turn out to be mild, by a method strictly antiphlogistic, than to run the risk of mistaking an insidious confluent case for a mild one. Therefore, we should commence the treatment of all cases, as though we expected them to be con-

fluent. To this end, if we are called early, it will be useful to bleed moderately, and repeat once or twice, if the system react under it; if not, we should not repeat. Mercurial purges should be used freely during this stage of the disease. Keep the patient out of bed in the day-time—the covering should not be increased at night, even though the patient be chilly. The room should be of a very moderate temperature, not too cool. The face, and particularly the eyes, should be frequently washed with cold water. Encourage free dilution, but enjoin the most rigid abstinence. A slice of dry toast, a roasted apple, or a little plain boiled rice, are, perhaps, the only things that should be allowed.

In cases which turn out to be distinct, this treatment may be gradually changed in five or six days after the appearance of the eruption. A more generous diet may be gradually allowed; and no medical treatment will be necessary in cases reasonably mild, except an occasional purgative. Jalap and crem. tart. afford a good one, or a little calomel and magnesia, &c. according to the habits of the patient, may be given; allowing, also, moderate anodynes at night. In this form of the disease, then, our cares will terminate in a great degree, with the first stage of the disease; for, unless the case be very severe, little or nothing need be done or apprehended after the completion of the first stage. I have seen biles very obstinately troublesome in the declension.

It is, therefore, in the confluent disease, that we perceive the advantage of some division of the different periods for practical purposes. As regards the first stage of the disease, when confluent, it may be remarked, that in Sydenham's account of the regular disease, it terminates on the eleventh day. But, in the irregular, as noticed by this author, it sometimes happened later. I have observed, that in the present disease, it was mostly about the fifteenth day. It is known by the swelling of the face, mostly, of the extremities, also. This is a critical period, and it is difficult to lay down any rule of practice, because, there is not only great variety as to the time of its occurrence and its duration; but it is also, at times, so obscure, as to be discovered with great difficulty. The most usual period of occurrence, was on the thirteenth, fourteenth, or fifteenth day, and its duration mostly about six or seven days.

The face, or face and extremities, having swelled pretty suddenly, in a great majority of cases, very considerable excitement

of the arterial system began. The pulse became hard, bounding, and frequent; respiration became more laborious—great thirst—extreme soreness wherever any of the pustules existed. Patients did not now complain much of headach or backach; but they suffered all that violent fever which hundreds or thousands of phlegmons could produce. Delirium harassed the sick at night, and the pustules rendered the softest bed often a bed of thorns. During this stage of the disease, there was often an insatiable thirst; this was always an unfavourable sign. Most of the patients, at this time, were loose in their bowels—some had violent griping—a few were costive.

The above symptoms were most common; in a few cases, the system would not react even at this period; but the patient continued cold and chilly. Such cases were always unfavourable, I believe always fatal. I observed, that those patients who enjoyed their appetites during this stage, generally recovered.

I could not discover, during the middle stage of the disease, that any advantages were obtained from medical treatment, except that of moderate anodynes, frequently repeated—the confinement of the patient to bed—the very free use of drink, slightly warmed, and still of a bland quality, and sustaining the patient with mild aliment, such as a roasted apple, milk and mush, molasses and mush, and the like. Animal food, or even broth, was always improper. Drinks of porter or beer, in form of sangaree, were generally grateful. If the patient happened to be costive, which was not often the case, a little calomel or jalap and crem. tartar were useful. This was the period in which we had to rely more particularly upon the natural powers of the system. Exposure to cold, or the use of cold water, were now no longer called for by the actual state of the system; but they were now highly detrimental. A physician, judging from the state of the pulse in this period of the small-pox, would probably bleed, give antimonials, and employ other antiphlogistic means. But our experience in the disease directs us to pursue a different course. And notwithstanding what Mead and others have said in favour of bleeding, at any period of the disease, I am well convinced no benefit was obtained by the practice in any case which came under my notice, during the second stage of the disease.

The third period or declension of the disease commenced, mostly, about the end of the third week. The swelling of the eyes and

extremities would subside ; the thirst abate ; the pustules dry rapidly on the face ; the appetite improve ; delirium subside ; and, provided the patient was freely supplied with laudanum, he became tolerably comfortable. Sometimes, however, the febrile symptoms continued with great violence and obstinacy, even where there was a tendency to recovery. Under these circumstances, much benefit was sometimes obtained by active cathartics, succeeded by opiates ; and, occasionally, blood-letting was practised with much advantage.

But, in a great majority of cases, so soon as the swellings and suppurative fever were pretty much abated, very considerable debility ensued ; the scabs would fall off, but were succeeded by successive crops of ill-looking scabs or biles, the latter sometimes small and numerous ; in other cases, large, and few in number ; but these biles, in all cases, were extremely painful. In all these protracted cases, durable tonics were useful, particularly the decoction of bark, or an infusion of quasia with the elixir vitriol ; cordial drinks, light nutritive diet, with an occasional aperient, were all that seemed necessary. When something like convalescence was established, and the biles remained, about the end of the fourth week, frequent purging with salts or jalap and crem. tartar were always useful ; but, generally, a light generous diet was now necessary. I saw but two persons who died in the declension of the disease, and this was a young woman who had recovered from a severe confluent disease, and who miscarried after the fourth week, and died immediately, without having disclosed her situation. In this case, it is highly probable, the fœtus, then supposed to be in the fifth month, died of the small-pox, and led to the death of the mother. I also saw a child who died after the third week of secondary fever.

I saw a mild case of distinct disease, in which a fœtus died at the fifth month. About the end of the third week, the woman miscarried, and the fœtus was so changed in its organization, as to prove that it had been long dead.

It will be seen by the foregoing remarks, that most fatal cases terminated during the second stage of the disease ; a few during the first stage. It seems peculiarly important, however, to notice the fact, that although the second stage of the disease was most fatal, that still the issue of the disease depended essentially upon the treatment during the first stage.

In taking a general survey of the treatment of small-pox, we find that the treatment has not only varied in different ages, but that in the same age physicians differed greatly. It would seem to follow, therefore, that great imperfection in the healing art has existed, or that small-pox is a disease which we can control in a limited degree only. Both these circumstances may exist, and have, probably, been equally operative and injurious. Inoculation has clearly proved, that it is in the preventive practice that medicine can boast of any considerable control over small-pox.

History of Varioloid.—We are informed in the Edinburgh Medical and Surgical Journal for 1820, that the first well described cases of this disease noticed by a Scotch practitioner, were 150 cases reported by Dr. Adams, of Forfar, in the winter of 1813-14. From this time the disease was noticed by medical gentlemen in different parts of Scotland, and amounted to several thousands from the above date to 1820.

The disease was noticed at the Isle of Mann by Mr. Oswald, in 1817. It prevailed in several towns in England so early as 1818. In 1817 it prevailed at Mittou, in the south of France. It was seen in Switzerland during the years 1817 and 18.

In the month of August, 1821, it was brought from Liverpool by the brig Pallas. The captain of the Pallas, as will be shown in the sequel, stated that there had been no severe case of the disease on board, and that it was not supposed by himself or passengers to be small-pox, but was called swine-pox.

The first case which occurred of the disease in Baltimore, was in the person of the daughter of Mrs. Miles, in Cowpen alley. This girl had been vaccinated some years before by Dr. Smith. Not having paid any attention to the accounts which had been received from Europe of varioloid, I then supposed it to be a case of small-pox, as did Dr. Smith also. I now have no hesitation in pronouncing it a case of varioloid. A little boy, brother to the first case, at the time of a vaccine pock having just completed its course, was covered with a moderate eruption of pustules, which I am confident was varioloid, but this was one of the mildest cases I have seen—in three or four days it had disappeared. It may be remarked of the girl, just mentioned, that her case was the worst case of varioloid that I have seen succeeding vaccination. I saw one worse case in a mulatto man at the hospital, after small-pox, which I shall

notice in place. The next case of varioloid I witnessed, was that of a yellow girl belonging to captain Pyke. She had a few horny pimples, accompanied with very slight fever, headach, and other symptoms of the disease in a very mild degree. She was not confined, nor was she aware of having been exposed to the disease—her residence, however, was not more than a hundred yards from Mrs. Miles' above mentioned, and where small-pox itself existed. The third case was a son of Mr. Essender, who had been vaccinated some years before. He had some fever, sore throat, headach, sick stomach, and the usual symptoms of small-pox, but in a slight degree. He lay about the house, but was not confined to bed. The eruption in this case was also of that peculiar horny structure: they never exhibited any appearances of suppuration, neither did the eruption in this case, or in the girl at captain Pyke's, resemble chicken-pox in the slightest degree. Mr. Essender had five other children that had not been vaccinated, and among them, one about four months old, which had never been taken abroad. The family supposing the eldest boy had the small-pox, and seeing that it was very slight, omitted to have the other promptly vaccinated. A few days after the recovery of the boy, this infant was seized, as also another boy about seven years old. The infant had a very great crop of small-pox well marked, and but moderately confluent. It died of secondary fever after the third week. The other boy had long had some disease of the brain, which caused something like the wry neck. He was evidently affected with confluent struggles, but died of convulsions before the eruption filled; or rather, they showed no disposition to fill. The others were saved by vaccination. I did not attend this family, but was invited to see the cases.

The next case I saw, was that of Miss Woods, a young lady who had been vaccinated some years before, and who had spent several days in the hospital with her brother, who died there deranged. Her sister-in-law, who had spent several days, was also attacked a few days after leaving the hospital, and soon afterwards her infant. Miss Woods' case was of the worst kind, except a few pustules in the face which seemed to mature, and which in this case, and several others which I saw, were a light saffron colour, differing in this respect decidedly from small-pox. Those having the saffron colour were slow in drying, requiring about the time of ordinary distinct small-pox, but the eruption generally spread over the body and limbs was darkened and drying on the fourth or fifth day. In

this case there was a peculiar disturbance of the pulse, which I shall notice hereafter, and a skin remarkably hot, inability to sleep, a very sore throat on the third day after eruption, fever, headach, chills, backach---in short, the symptoms which ushered in the eruption were equal, and indeed greater, than those I met with in some severe cases of small-pox ; but they were of much shorter duration.

By this time, the last week of November, the varioloid disease had become common throughout most of the city, and it would be entirely superfluous to narrate all the cases I saw. I shall notice no more than are necessary to support my opinion respecting the treatment of the disease. The cases which I have reported go to prove incontestibly, that this eruptive disease, in these cases, had its origin from small-pox ; for neither of them resembled, in any degree, chicken-pox ; and two cases could clearly be traced to the hospital, where cases of small-pox had been sent from the city by the board of health : and in the family of Mr. Essender the disease was communicated by the boy affected with varioloid. Neither the infant who first took the disease, nor its mother, had been from home for two months prior to the disease affecting the infant.

The varioloid disease occurred in the family of Mr. Henry Haln, but was so slight in all the cases, being four or five in number, that none of them were confined. Two of them had no more than a few pustules on the back, first discovered by their complaining of the part itching. The pock (for they were not pustules) were somewhat conical, hard, and of a fiery red colour throughout their whole extent, having a small red margin. What is particularly interesting in this family is, the circumstance that an infant born during the existence of the varioloid, was seized on the twelfth day after birth with small-pox, which doubtless had been communicated by those in the house having varioloid. The eruption was not numerous, but the infant died. I must acknowledge that I had been attending cases of small-pox about the time of my attendance as accoucheur, but not on the day of its birth. The next case of varioloid which I think worth noticing, occurred at the jail. A coloured man was brought into the jail, who broke out a day or two after his confinement, with well marked varioloid disease—he had a good mark on his arm of the vaccine pock. I immediately vaccinated all the persons about the jail who had not had small-pox

vailing in Baltimore, and which has been termed in Britain the varioloid disease, is a new one. I believe this opinion to be erroneous; and in this sentiment, I trust, I shall be supported by history. To avoid numerous and tiresome quotations, I wish to acknowledge that I derive much of my information from Mr. Moore's excellent history of the small-pox.

History of Small-Pox.—I think it has been satisfactorily proved that small-pox existed in China and Hindostan from a very remote period of time. But the inhabitants of these countries having little or no intercourse with other nations, it is easy to account for the disease remaining for a long time within their own dominions. Be this as it may, we are certain that this disease did not exist in Europe during the prosperity of Greece and Rome. This fact had been mentioned by Baron Dimsdale, in his work on inoculation, published in the year 1781; and was since indisputably established, by Mr. Moore, in his history of the small-pox.

Mead and Dimsdale, with many others, date the origin of small-pox in Europe, from the time of the crusades; at which time it was supposed to have been brought from Asia. This opinion has been disproved by Moore. He offers many facts and deductions, to prove that small-pox existed at an early period in Arabia; among the facts may be noticed the war carried on by the inhabitants of the different countries on the continent of Europe, with the Asiatics, by which the disease must have been spread.

It is said that one Notkerus, a physician of the tenth century, who lived in Switzerland, treated a bishop for small-pox. And from the skilful manner in which he treated the case, we may reasonably conclude, that he was familiarly acquainted with the disease. Among the Anglo-Saxon manuscript, supposed to be of the tenth century, has been found a very curious prayer against the small-pox.

These and other facts were, of course, prior to the crusades, for, the crusades did not set out on their expedition till the year 1096. In this century (the eleventh,) Constantinus Africanus, in Italy, and Avenzour in Spain, published their works, in which are found discourses on small-pox as an ordinary disease. From the geographical position of Italy and France, we may readily believe, that small-pox must have overrun France, long before the

crusades. The plagues which are said to have overrun France eleven times in the ninth, and six times in the tenth centuries, were, no doubt, sometimes the small-pox and measles; as we know that many diseases in early times, and among them small-pox, were denominated *pestis*. Constantinus Africanus, as well as the first translator of Rhases, used the term *pestis* for small-pox.

The first positive evidence of small-pox, in England, is found in the writings of Ralph Hollingshead, who says, that in the year 1366, "also, many died of the small-pox, both men, women, and children." Persons were said to have died of Galra Breac, (small-pox,) in Ireland, in the year 1368.

Nothing very remarkable seems to have been recorded of small-pox, except individual cases, until the fifteenth century; not because the disease did not exist, but because Europe and the world were buried in intellectual darkness.

Medical History of Small-Pox.—Rhases quotes the writings of Ahron, who lived at Alexandria early in the seventh century. The prominent symptoms of small-pox, as given by Ahron, are an inflammatory fever, pain in the head, redness of the eyes; the eruption commonly appears on the third day. *Sometimes the eruption appears on the first day.* I am of opinion that true small-pox never make their appearance on the first day. I shall notice this when I come to speak of *varioloid*. Ahron says, when the eruption makes its appearance it is necessary to beware of refrigerants; this leads us to conclude that refrigerants, if not evacuates, had been used, during the fever which he calls inflammatory. Unfortunately, his salutary caution about refrigerants, was soon misunderstood; and millions of mankind have fallen victims to measures which Ahron would, probably, have been the last to advise: that of a hot course of treatment during the advances of the eruptive fever.

If Ahron's notion of an inflammatory fever accompanying small-pox induces us to think favourably of him, we are compelled to believe, that the next known writer must have done incalculable injury: George Bactishra, who lived about the end of the eighth century, declares, "that things that are cold are mortal"

John, the son of Messue, lived to the beginning of the ninth century. He advised a cooling collyrium of rose-water and su-

mac, to avoid purging after the seventh day in small-pox. The patient to have fire in the winter.

Isaac, called the Israelite, has been considered the father of Arabian physic, and is supposed to have lived in the ninth century. He was reputed a learned physician; but his opinions of small-pox are dangerously erroneous. He advises us to beware of cold medicines, which might shut up and congeal the humours; that we should use "*warm and moist remedies.*"

Serapion is supposed to have lived towards the end of the ninth century. He says, nothing contributes more to the cure of small-pox than bleeding; if infancy or timidity prevent the opening of a vein, cupping should be employed. A slender diet is to be used; purgatives are to be avoided after the seventh day. The sick within the circle of this physician's practice must have derived great advantages from him, but, through ages afterwards, mankind suffered from the errors of other authors.

Rhases lived in the beginning of the tenth century. He describes the disease with tolerable accuracy, and says, that all persons are liable to have it once; *but that persons have had the disease twice, and even thrice.* He is the first writer who has recorded this fact. He advises bleeding, cold drink with great freedom, ice-water—bathing in cold water—cupping where there may be objections to bleeding by the lancet. He was aware of the advantages of narcotics in some cases. But his experience did not direct him, with any certainty, to their proper application. Still, it appears, that his most usual practice was free depletion, cold water, and cooling medicines; and afterwards to use narcotics, notwithstanding the continuance of the fever. In short, Rhases seems to have approached nearly to the most correct line of practice. His greatest fault seems to have been a desire to do too much. He practised upon a theory extremely gross; but like the illustrious Sydenham, his talent for observation guided him through a correct and efficient practice, in despite of his theories. Rhases was extremely watchful in guarding the eyes and throat, by the frequent application of cold water. We must admit that his use of cold bathing, and of large draughts of cold water, would not be suited to the climate of the United States; but, we have reason to believe that it was both safe and efficient, in the climate of Arabia, more especially in the hands of Rhases.

The works of Rhases were calculated to do mankind incalcula-

ble benefit, through succeeding ages. But, they were both preceded and followed by writings calculated to benight the profession in regard to small-pox, as did the want of literature, through some ages, involve the world in mental darkness. This author was soon succeeded by Hali Abbas, who did not materially improve the practice in the disease; but was the first writer who had any correct notion of the contagious character of small-pox.

Avicenna, soon after Rhases, must have seriously injured the practice, for, he advises sweating, warm covering, and the like, for expelling "morbid humours."

Cotemporary with Avicenna lived Avenzour of Spain, who did not improve the practice; but must have injured it by advocating the practice of Isaac, very different from that of Rhases.

Constantinus Africanus lived towards the conclusion of the eleventh century. Having attempted to impose on the world the works of Isaac for his own, we are warranted in concluding, that he must have done great injury to the practice in Italy.

Averrhoes, a Spanish moor, practised, or, at least, wrote on small-pox, greatly to the injury of his countrymen and to Europe. But the injury was done in a way of which he never could have dreamed. He taught that white colours are refrigerent, but that all red colours are hot, from the fiery particles with which they abound. This theory led to one of the greatest errors of the dark ages, which was, the practice of using red curtains, red blankets, and the like, as principal remedies in small-pox. This absurd practice, joined to a hot regimen, destroyed millions of mankind during some ages.

In a compilation of writings made by Franciscus de Podemon-tiura, and by several Italian physicians, we are advised to draw the eruption to the skin, by "warm air and red bed clothes;" and by "looking upon red substances." This practice extended over all Europe, and was soon associated with other follies of the dark ages; such as blending the treatment of disease with astrology, magic, witchcraft, and the like. Arnaude de Villeneuve thought, at the close of the thirteenth century, that sorcery and magic were within the physician's province. This Sicilian author placed small-pox and measles in his classes of anthrax and carbuncle, not liking the epithet variolous.

It was a great misfortune for England, that her first medical writer should have given the worst possible advice respecting small-

pox. This writer was Gilbert, who Dr. Friend supposes to have lived at the end of the thirteenth century. He advises that the sick of this disease be *guarded against cold, and neither to grant them cooling medicines or diet*. He says further, that the old women of the country added to the drink of the sick some burnt purple, or red ingredients, which, like cloth dyed in grain, had a secret virtue of curing the small-pox.

In the fourteenth century, Bernard de Gordonio advised that small-pox patients should be lapped in red cloth.

John, of Gaddesden, an English physician, in the time of Edward the second, done his country incalculable injury, by recommending the warm regimen in small-pox, to drive out the *humour* to the skin. This author says, the disease does sometimes attack the same person twice. He lived in the fourteenth century.

Mercurialis was born in Italy, A. D. 1530. This author says some persons have small-pox twice, and even thrice. He made a slight effort to improve the practice, for, he says, the heat of the chamber should be moderated, and that the number of red blankets should be lessened. He condemns the use of external applications, which were then very common, and often very hurtful.

Daniel Sennert, born at Brestlaw, 1572, advised physicians to hold no consultations with the devil, for, although he was skilled in medicine, he was an enemy not to be trusted. But it had been happy for thousands, if Sennert had never been born, for this was the least harmful part of his advice. According to the advice of this physician, small-pox patients are to be carefully tended in a warm room, and to be well lapped up.

Willis, in the seventeenth century, made a bold attempt to improve the practice. He advised bleeding, purging, vomiting, and diaphoretics. He says persons may have the small-pox even three times.

Diemerbroek, in the seventeenth century, saw many instances of persons having small-pox more than once.

Sydenham, the modern father of physic, brought about an entire revolution in the treatment of small-pox. It will be more in place to notice the practice of this author, when I come to speak of the treatment of the disease.

Herman Boerhaave, born at Leyden, viewed the fever of small-pox as being of an inflammatory nature. We may, therefore, readily suppose, that he adopted a plan of treatment decidedly antiphlogis-

tic. This author predicted that a preventive would probably be discovered some day against the small-pox.

We have come down to the time when this disease was well understood. The simple arrangement by Sydenham and others, into distinct and confluent, has been attended with many advantages, and requires no improvement.

The historical sketch which I have given will enable me to be very brief in speaking of the distemper in question. Before I proceed to an examination of the treatment, it will be necessary to notice the symptoms of the prevailing epidemic.

Symptoms of the prevailing Small-Pox.—We have seen how unaccountably the treatment has varied in different ages, and in the hands of physicians of the same age, according as they were influenced by different theories. Although we are led to believe that practitioners differed in the remedial treatment which they adopted according to the theoretical notions they entertained regarding this disease, still it is a remarkable fact, that, from the time of Rhases to that of Sydenham, physicians appear to have been more influenced by observation than by theory, in adopting a correct treatment. Rhases and Sydenham practised upon theories, crude, erroneous, and dangerous in other than their own hands. But these two great physicians, by their talent for observation, avoided the snares or dangers which their theories presented to others.

There seems to be as great a similarity between the theory as the practice of these two physicians. The ideas of Rhases respecting a ferment in the blood, which he compares with the fermentation of the grape, are about equivalent to Sydenham's ideas of concoction. At the present day, all well informed physicians view it as a disease more or less inflammatory, and demanding an antiphlogistic plan of treatment.

Although the disease is essentially of an inflammatory character, yet the degree of sthenic excitement is immensely diversified. The same remote cause is indeed capable of producing disease, differing in degree, from the mildest case of the *nurse's-pox* or *variolid*, to that of the most aggravated case of confluent small-pox.

There is so close a relation between the symptoms and treatment of small-pox, that to do justice to one, we must bring to view the other. And to do justice to either, we must examine into the general character of the disease, for it is a fact long and well known, that the general character of this disease differs greatly in different

years. Yet, it has been well observed by Mead, that the specific matter is always the same. It has been justly remarked by this author, that different persons, in the same family, have the disease in the same season, of very different degrees of violence. Still this does not go to disprove the epidemic character of the disease, since we most manifestly see, that the general character is greatly different in different seasons, as has been particularly noticed by Sydenham; and this probably has given rise to the great extremes in practice, which have existed from the time of Ahron to the present day.

Hali Abbas, of the ninth century I believe, was the first author who spoke with confidence of the contagious character of small-pox. We are not aware that much attention was paid to this dangerous character of the disease for a long succession of ages after Rhases. This remark applies to Europe, and the contiguous part of Asia. In some parts of the world, mankind had, long since, a knowledge of this fact, for we are told, that at Thebit, houses and villages were razed, towns left unoccupied for three years, and the sick left to starve. These measures not only show the belief of those concerned, in the contagious nature of small-pox, but also exhibits a plan by which this disease was likely to be cut off for a period of time.

When Europe became to trade more freely with India, and apprehensions arose on account of the contagious character of the plague, the people of Europe began to see the small-pox clothed with all its horrors; the greatest of which is its contagious properties. This appalling fact gave rise to more than suspicion, respecting the nature of the remote cause of other diseases; all diseases were believed to partake of this character. And, with the exception of Sydenham, the world long lost sight of its epidemic character. Now, although we have to acknowledge the contagious nature of the disease, I am of the opinion, that the disease (as regards its treatment) obtains its essential differences from particular constitutions of the atmosphere. This disease is in all seasons divided into confluent and distinct; of each of these there is an indefinite variety. The confluent and distinct will appear in the same family, and are often dependent upon accidental causes. But it is a well known fact, that of a given number of cases, there will be a great difference in the mortality of different seasons. It has been found, that in some years, the proportion of deaths is not more than as one

to fifty, while in other years, the mortality, as observed by the same physicians, is equal to one of every four. Dr. Thompson has made this remark, as may be seen in the review of his opinions on varioloid, in the *Edin. Med. and Surg. Journal*. This is a fact of great importance, and admonishes us not to loose sight of the epidemic character of this disease merely because it is also contagious. It is to be presumed, that no such disproportion of mortality could occur, if we treated each epidemic suitably to its peculiar propensities. I mean by propensities, a disposition in the disease, as influenced by different seasons, to exert its influence more particularly upon some one part of the system, as the kidneys, the stomach, brain, the blood, the throat, the lungs, &c. A disposition to the kidneys has been found peculiarly unfavourable. And it is a curious fact that, notwithstanding the variety produced in the disease by some atmospherical differences, that still, the remark made by Sydenham is strictly true, that the danger to be apprehended from the quantity of eruption, does not depend upon the number over the body, but upon the number in the face only. This fact is of much value, and shows us how assiduous we should be, in repelling the disease from this part, as advised by Rhases, and many since his time. Sydenham, speaking of this disease, says, "the small-pox, in those years in which it is epidemic, when it is also mild and regular, usually begins about the vernal equinox; but in those years wherein it is not only epidemic, but likewise irregular, and of a more dangerous kind, it sometimes appears sooner, viz. in the month of January."

Now, I believe no one will call in question the pre-eminence of this author for correct observation; and if these observations prove any thing, it is this:—small-pox, though contagious, do nevertheless, at least sometimes, arise spontaneously. We are aware that the cow-pox may arise in the human subject, from the disease affecting the cow. If the disease is denied a spontaneous origin in the cow, this peculiarity cannot be objected to in the horse. The grease in the horse's heels arises spontaneously. Now, if the vaccine disease be the product of animal secretion, in the horse or cow, or both, and this secretion produce a disease in the human subject, capable of destroying a susceptibility to small-pox, and we have evidence of small-pox arising spontaneously, how can we doubt the fact, that small-pox have, at times, a like origin, from the same disease, under some peculiar modification in the same ani-

imals, or from a different disease in the same or other domestic animals. There was a time when small-pox and syphilis arose spontaneously, and how can we doubt but that they may originate again and again in the same way.

Let us, however, return more closely to our subject, and endeavour to compare the symptoms of the small-pox of this season with those of the disease described by Sydenham. This author says of the years 1667, 1668, 1669, speaking of the distinct disease, 1. There is "a chillness and shivering." This, though sometimes present, was far from being universal. "2. Extreme heat." This was common in the distinct kind, as well as in severe cases of varioloid. It was seldom present in severe cases of the confluent kind. The continuance of the hot skin in the distinct kind arose, perhaps, in some degree, from such patients having been more freely depleted. Many of the most malignant cases made their advance very insidiously, discovering little or no disturbance in the pulse, but exhibiting some want of energy there, without even a corded state of the pulse. Some of these patients were chilly, but few to any great degree. "3. Violent pain in the head and back." This was, I believe, universal, but was as common in mild cases, and in severe cases of varioloid, as in cases more severe. "4. Vomiting." This was not a common symptom, though sometimes present in desperate cases. "5. And in grown persons a great tendency to sweat." This was not common. "6. Pain in the scrobiculus cordis, especially on pressure." This symptom was not remarkably manifest. "7. Sleepiness and stupor, especially in children." Few cases of the disease in children came under my notice; I therefore can only say, that in these few cases there was a remarkable want of sleep, and almost incessant crying. In one case, I saw a slight convulsion in a very young infant; it had a mild distinct disease, but prior to the appearance of the eruption, it cried incessantly forty-eight hours. "The distinct small-pox comes out mostly on the fourth day." I saw no case of the distinct disease coming out so late as the fourth day. The earlier the eruption, the more mild the disease, in all the cases I saw.

In the distinct kind, "the eruption proceeds nearly in the following manner: pale red pustules, as large as the head of a pin, show themselves here and there on the face first, or on the neck and breast, and afterwards on the whole body. During this stage of the disease, the throat is affected with a soreness that increases

as the pustules rise, which growing every day fuller and plumper, inflame the skin and flesh of the neighbouring parts." This description applies well to severe cases of the distinct sort, with the exception that, in most cases, the eruption was far advanced, and mostly beginning to decline, before the throat became much affected. This, in every variety of the disease, was a constant and severe symptom.

"About the eighth day from the beginning of the disease, the spaces between the pustules of a pale white begin to grow red, and swell in proportion to the number of pustules." This appearance mostly occurred about the tenth, twelfth, or fourteenth day of the disease, and the swelling and inflammation was often considerable, where the pustules were not very numerous. Speaking of the swelling of the eye, Sydenham says, "this tumour looks like a shining inflated bladder drawn over them." This I did not observe in a single instance, although I saw many cases where the eyes were closed during several days. Most of this swelling arose from a neglect of the proper application of cold water, (or to do away prejudice,) milk and water.

"On the eleventh day the swelling and inflammation manifestly abate, and the eruption, both of the face and of the rest of the body, dry and scale off." I did not witness so early a subsidence of the swelling and inflammation, or falling off of the scabs. Few cases abated in any considerable degree before the fifteenth day, and even in this form of the disease there was a succession of scales, and of small biles and ill looking scabs, particularly about the nose.

"The confluent is attended with the same symptoms in common as the distinct, only they are more violent. The fever, anxiety, sickness and vomiting, being more severe." The reverse of this was strictly true during the present epidemic. There was often no heat of the skin; a weak depressed pulse was common, and more shivering than in the distinct kind. "A looseness sometimes preceded the confluent kind." This state of things did not come under my notice.

"Sometimes this sort (the confluent) comes out like an erysipelas, and sometimes like measles." The former appearance I witnessed in several cases; and nothing but the knowledge that the small-pox prevailed, would have enabled one to decide, with confidence, on such cases, for two or three days. These cases were always very violent, and attended with cold skin, feeble pulse,

or the vaccine, being about fifteen persons. Not one of these was affected even with varioloid from this patient. But in the next room was a white prisoner, who declared that he had had the small-pox, knowing at the same time that it was a falsehood. About two weeks after the entrance of the case of varioloid, he broke out with small-pox as well defined as any I had ever seen, being a very severe case of the distinct sort. That this patient received the disease from the varioloid patient, there can be no doubt.

The next case worthy of remark, which came under my notice, was that of Miss Scott, daughter of the late judge Scott. She was inoculated by me with recent matter from a well marked case of distinct small-pox. On the eighth day she had a slight fever—and a few pimples, evidently varioloid, appeared, but they never filled.

Shortly after this occurrence I met with a well marked case of varioloid at the hospital, where there were a good many pustules in the face, which, about the fourth day, without ever having taken on a vesicular appearance, bursted open, and presented broken, tender-looking scabs, of a pretty deep saffron colour. This case was strongly marked by its running its course sooner than any well marked cases of small-pox. The patient, though affected with considerable fever the first two days, never complained of being sick afterwards. The sore throat was almost the only inconvenience she suffered from the disease after the completion of the eruption.

My next case was a yellow man at the hospital. He was sent in under an apprehension of his having a severe variolous disease. And for the disease to remain distinct, it would have been impossible for him to have been more thickly covered with the eruption. The eruption resembled precisely that of good small pox. Still, under these appearances, I had no hesitation in pronouncing this a case of varioloid. For although he had had a very violent fever during the two first days, it subsided on the third, and the pustules were as well filled on the third day as at any future period; and by this circumstance alone, I unhesitatingly pronounced it a case of varioloid. By the fifth day, the pustules in his face were a very dark brown colour, and of a dry, hard consistence. After the eruption he never complained of being sick, but he did not choose to walk about; the sore throat was the only symptom which trou-

bled him after the pustules were filled, and this I have already stated, was on the third day.

About this time I saw Mrs. Gaddes, a young married lady, who had been inoculated about seventeen years before, and had a good mark upon her arm. Her fever was attended with that peculiar heat of the skin and agitated kind of pulse, which had become familiar to me as attending severe cases of varioloid, or cases of small-pox accompanied with high inflammatory symptoms. I felt a good share of confidence in pronouncing it varioloid, or distinct small-pox. It turned out to be a severe case of varioloid. Soon after this case I saw a coloured woman, Katy Greenwood, who had had small-pox in her infancy naturally, and her daughter, who had been vaccinated some years before—the mother had a small number, perhaps fifty, of small conical horny pocks; they never filled. The girl had more, but not one of them bore any resemblance to chicken-pox. They were but slightly indisposed.

I saw several cases of children affected with this disease, who made no complaint. The pustules were sometimes tolerably numerous, and principally of the horny conical kind, but here and there might be seen a well defined pustule, exactly resembling chicken-pox. In these cases the pustules were mostly confined to the back, and back of the head.

I saw a few cases where there was nothing but a few fiery, prominent pimples, which disappeared in three or four days. It would be altogether useless to notice all the cases of the disease which I have seen. I will, therefore, close the history of the epidemic by relating a few cases more. In the family of Mr. George Wall, the following circumstances occurred:—his sons had all been vaccinated some years since; they went to the funeral of a relative who had died of confluent small-pox; four of them took the disease in from ten to fifteen days, and had it severely. One lad had his face much affected with pimples common to young men. His pock matured well, particularly in the face, and every pimple which existed prior to his attack became a pustule, so that his face was quite full. There was nothing in this case different from a natural case of distinct small-pox, except that, under equal circumstances, a person affected with small-pox would not have recovered so soon by several days. That these cases were produced by exposure to small-pox, there cannot be a doubt.

A young gentleman suffered an attack of varioloid of unusual

severity, from having dissected a subject who had died of small-pox. This case was accompanied with symptoms which required free depletion, and a corresponding course of treatment.

It was remarked that his fingers, upon which there happened to be a number of small wounds, were affected with the eruption in a peculiar manner.

It has been supposed by many, and members of the profession are sometimes charged with concurring in the supposition, that the system becomes, some years after vaccination, more liable to varioloid. This does not correspond with my experience. I vaccinated more or less children every year, for several years past, and I do not know of one individual who had been vaccinated by me in former years, that was affected with varioloid—but some of those vaccinated by me in the present year were affected with varioloid, a few weeks afterwards, in a slight degree. Among these, I can mention the child of Mrs. Miles, already noticed, and a child of Mr. Peters, of Howard-street.

Varioloid is a disease differing by a wide range of symptoms. It is marked with shades of difference, from that of a few scattered red pimples like millet seeds, to that of the most severe and perfect case of distinct small-pox.

It will be granted, I presume, that in small-pox, as a general rule, cases are mild in proportion to their duration. So as respects varioloid, cases of it terminate sooner in proportion to their mildness. And it is a truth, that distinct small-pox is of shorter continuance than the confluent. It is equally true, that varioloid is shorter in duration than distinct small-pox. So that there is a regular gradation in this respect, from the confluent small-pox down to the mildest cases of varioloid.

I have seen, in cases of varioloid, a few pustules resembling chicken-pox precisely; but even in these cases there would not be more than a few of this description. At least nine-tenths of the pustules in all the cases of varioloid which I saw, were of a peculiar horny firmness, and more conically shaped than varicella, and, in most cases, the whole of the pustules were of the horny kind. I saw a few cases of varioloid succeeding varicella, after an interval of several years. In a majority of cases of varioloid, the eruption appeared on the first day of the disease; and sometimes the pustules attained their full size in twenty-four hours, generally

about the end of the third day. The variolous eruption, I believe, never appeared before the second, and seldom before the third, often not till the fourth or fifth day of the fever.

In a former part of this communication, it was remarked, that Ahron had observed that the eruption of small-pox sometimes appeared on the first day. This fact is strongly corroborative of the opinion that varioloid is not a new disease, but must have been seen by Ahron. When this opinion is supported by the declarations of several highly respectable writers, that small-pox affected the same persons twice, and even thrice, there can scarcely be a doubt but that varioloid has long existed. Whether it ever existed as an epidemic before the introduction of vaccination, is a question which we cannot now undertake to prove or disprove. I do not suppose, however, that it had any connection with vaccination. We see other diseases sometimes existing as epidemics; at other times, in sporadic cases only. We see this disease appearing as epidemics do at long intervals. Where are the plagues which formerly overran France, the sweating sickness of England, the influenza which now and then extends over perhaps the whole world? It is not more strange that varioloid should now, for the first time, or for a long period of time, appear as an epidemic, than that the plague, yellow fever, influenza, spotted fever, &c. should have their periods of appearance. It would be much more strange that a new disease should arise, which, in Europe and America, affects persons who have had the small-pox or vaccine, after the lapse of so many preceding ages.

I have already noticed, in speaking of small-pox, the assertions of the following authors, who saw cases of second attacks of small-pox in the same individuals. Rhases of the tenth century, in Arabia; John of Gaddesden of the fourteenth century, in England; Mercurialis in Italy, who lived in the sixteenth century; Willis of the seventeenth century, in England; and Diemerbroek of the seventeenth century, in Holland, saw cases of second, and some say of third attacks of small-pox. Sydenham speaks of the bastard small-pox, which, he says, is no way akin to the true disease. Every practitioner must be familiar with cases of what have been termed the nurse's-pox, being nothing but sporadic cases of varioloid. Almost innumerable instances have happened where inoculators of the highest respectability for medical judgment and correct conduct, have been unfortunate in having small-pox to succeed ino-

culatation at periods of more or less time. All these facts taken in connection, establish, I think, conclusively, the opinion that varioloid is not a new disease. And it appears that the only novelty about the present disease is, that it has become epidemic. Why it has become so, we cannot pretend to say; but we know no more of other epidemics than we do of this. They come at longer or shorter intervals, and utterly defy all investigation into their specific natures.

That the contagion of small-pox is always precisely of the same nature, can scarcely be doubted. If this were not the case, we should behold countless varieties of the disease. Mead, Sydenham, and many writers, might be cited in favour of the belief, that the contagion of small-pox is always precisely the same, and that all its varieties depend upon the varying states of the atmosphere.

I am of the opinion that varioloid is never dangerous, unless it be greatly mismanaged, and even then it is not easy to subject the patient to any risk. It was correctly remarked by Dr. Buckler, that too hot a regimen, with a stimulant plan of treatment, was never attended with any great hazard. On the contrary, such maltreatment only hastened the recovery of the patient, not, however, without increasing the febrile symptoms and the number of pustules, more or less, according to the extent to which such treatment was carried.

Varioloid never proved fatal unless blended with some other disease. Dr. Roberts informed me that he had witnessed a case which terminated fatally. This patient had been greatly intemperate in former years, and had taken an oath that he would not use spirituous drinks. In the course of the varioloid, he was attacked with dysentery, which rapidly reduced him, and no entreaties could prevail on him to take cordial drinks, in consequence of which he fell a victim to his own obstinacy.

The pulse was often greatly excited in varioloid, with a hot skin, violent head ach, back ach, sick stomach, and all the usual symptoms of small-pox in a very violent degree; even delirium was not uncommon during the first two or three nights. When the eruption made its appearance these symptoms always suddenly abated, but the patient was now seized with sore throat more or less violent, mostly as severe as that attending cases of small-pox.

There are strong reasons for believing that varioloid might in all cases have been left to nature. But still nothing could be more

manifest than that great advantages resulted from a proper treatment of the disease during its febrile stage. An antiphlogistic plan of treatment should be pursued, both in regard to regimen and medicines. Bleeding was among the best remedies; purging with calomel, or sometimes with other articles, was always beneficial; cool bland drinks were useful. The inhalation of the steam of vinegar was useful where the throat was much affected.

So simple was the proper treatment in varioloid, and so little risk attended its career, that it was a matter of much more importance to detect with certainty the disease, than to adopt a proper treatment; because it was of immense importance to distinguish it from small-pox. The mark left after inoculation or vaccination, was one of the best criteria for distinguishing varioloid. The early appearance of the disease, and its rapid course, were also valuable signs. But in a great majority of cases, the pustules were sufficiently characteristic of the disease; for to its rapid career we may add the fiery margin which surrounds the pustules at an early period, and their most usually having a small dark point at their apex.

I cannot agree with Dr. Thompson, that varicella and varioloid are the same, for the following reasons:

Chicken-pox has often appeared in this country unattended by small-pox. We do not know that varioloid ever prevailed except contemporaneously with small-pox. I have seen chicken-pox prevail pretty extensively several times; no persons caught the small-pox from persons affected with that disease.

A few cases were noticed by the board of health, as having died of chicken-pox, blended with other diseases, early last summer.

I have never seen the chicken-pox resemble the present disease in the form of the pustules. Seldom, indeed, have I seen them suppurating at all; they were filled with lymph, and were longer in drying, and never acquired so dark a scab as the varioloid.

Persons after several days indisposition, in a few instances, broke out with varioloid. I believe these cases were always occasioned by some other disease having preceded. I saw one case of this kind, in which the eruption did not appear till after a confinement of ten or eleven days with pneumonia, for which the patient was taking mercury.

The following summary may not be uninteresting:

1. The present epidemic has more decidedly established the prophylactic powers of the vaccine disease.

2. The number of cases of varioloid after small-pox are not in greater proportion to those of vaccination, than one to several hundreds.

3. It has been the received opinion, that almost every person is once affected with chicken-pox: there are strong reasons for concluding that varioloid will not affect even one hundredth part of mankind, and perhaps a far greater number escape its influence.

4. Varioloid is capable of producing small-pox, and small-pox will produce varioloid. But there is no such connection between small-pox and varicella.

5. Varioloid is a modification of variola—either may exist sporadically or epidemically. Epidemically only when there is a peculiar and fit state of the atmosphere.

6. Both these diseases are the offspring of one specific contagious matter, which is liable to be modified by the particular condition of the persons upon whom it operates.

The drawings need but little explanation. Fig. 1. is a drawing of a case of a beautiful distinct disease. A vaccine pustule had progressed regularly till the tenth day, at which time, instead of the efflorescence, there appeared a pretty numerous crop of small-pox pustules. The drawing was made on the seventeenth day from the time of vaccination, and the seventh after the eruption of small-pox. It will serve to prove that the patient had genuine distinct small-pox, and such as we have seen in former years. The vaccine crust being surrounded by a purulent margin, by its forming the centre of an uncommon large variolous pustule, is a curiosity.

This crust would doubtless have produced small-pox had it been employed in inoculation. But it was lost, and I had not an opportunity of trying what it would produce.

Fig. 2. is a genuine case of varioloid taken from the arm on the morning of the second day. That is, about thirty-six or forty hours after the fever commenced. That the pustules had advanced with great rapidity, is very manifest. And besides this mark of distinction, the margin is more fiery and further extended, than that of any case of small-pox which came under my notice.

It may be necessary to observe, that the following report from the board of health, was not made at the time the small-pox commenced, in consequence of captain Otis having left Baltimore before the Board were apprised of the small-pox being within the city. When captain Otis returned to town, the following measures were taken, and I trust will satisfy every unprejudiced mind, that the Board of Health could not have prevented the introduction of the disease into the city.

EXTRACT FROM THE RECORDS OF THE BOARD OF HEALTH.

"THURSDAY, January 3d, 1822.

"Present, full Board.

"Pursuant to a summons from the mayor, captain Otis, of the ship *Pallas*, and Dr. Hamilton, deputy health officer, appeared before the mayor and Board of Health, with their consulting physician, for the purpose of having the introduction of small-pox into the city, through the medium of the *Pallas*, in August last, investigated.

"Captain Otis stated that the crew and passengers enjoyed good health from the time of the ship's leaving Liverpool, until her arrival at this port on the 15th August, with the exception of sea sickness; and that but one death had taken place on board, in the person of a child who had died of *Teething*; that previous to the ship's leaving Liverpool, a Scotch family applied for passage to this place, on the face of a girl belonging to which, a trifling eruption was perceptible, which he was informed was the result of swine-pock, (so called in Scotland) which had subsided; that Thompson, one of his crew, who died on the 28th August, with small-pox, was in perfect health when he was discharged from the ship at the Quarantine Roads; that a slight eruption was visible on the face of one of Mrs. Purviance's children, which its mother informed him was the *Rash*; (visited by the mayor, Board of Health, and consulting physician, on the 15th September, when it was found in a convalescent state after small-pox, as per the consulting physician's report of 4th October;) and finally, that every soul on board of the ship was mustered on the quarter-deck for the inspection of the health officer.

"Doctor Hamilton stated that he saw Mrs. Purviance's children, and Thompson, with the remainder of the crew and passengers, and believed them all to be in a sound state; that the ship was remarkably clean; and that after having gone through the usual routine of examining vessels, and having been firmly persuaded that no disease was on board, he permitted her to come into port.

"From the foregoing affirmations, &c. the mayor, Board of Health, and consulting physician are under the impression, that no concealment of any of the crew or passengers was effected by captain Otis; that Dr. Hamilton fully performed his duty as deputy health officer, throughout the transaction; and that the introduction of small-pox into the city, was owing entirely to the new appearances which it has assumed."

(True Extract.)

By Order.

WM. D. HARRIS,

Secretary to the Board of Health.

Health Office, Baltimore, 12th March, 1822.

ART. IV. *A candid Inquiry into the present state of Vaccination.* By
THOMAS D. MITCHELL, M. D. of Philadelphia.

WHEN serious and important changes are attempted to be effected in medical practice, it becomes the profession at large, to examine the grounds of those changes with all that candour and deliberation which the high responsibilities of the physician so imperiously demand. This principle has obtained, in relation to all the important innovations that have hitherto been made. When inoculation for small-pox was first introduced, it did not at once acquire the confidence of the faculty, nor of the public. It was by slow degrees that it attained to the high standing which it formerly possessed, as a means of lessening the mortality of the human race. Nor did vaccination share more largely in the confidence of medical men, when it was first ushered to the world, as a sure preventive of the direful ravages of small-pox. Ignorance and prejudice marshalled all their forces to oppose its progress, till truth, more powerful than either, like a mighty torrent, bore down opposition, and gave to vaccination that lofty elevation, which its intrinsic value so justly merited. Within a few years past, not a little distrust has been excited in the public mind, in Scotland and elsewhere abroad, and more recently in the city of Baltimore, in our own country, by reason of alleged failures of vaccination to ensure the human system from attacks of small-pox. The consequence of this distrust has been, that some physicians have again resorted to the practice of small-pox inoculation. It becomes, therefore, a most serious inquiry, whether the present state of vaccination be such as to justify distrust in its efficacy, and to warrant the revival of inoculation with variolus virus.

In order to ascertain the true history of this interesting question, it will be proper to consider the following points: viz.

1st. Are those who have been successfully vaccinated, liable to attacks of small-pox, and do such attacks prove fatal?

2d. Does the evidence, on the whole, warrant our continued confidence in vaccination as the only preventive of the mortality of small-pox?

The histories of epidemic small-pox that lately prevailed in Scotland and elsewhere, furnish the most conclusive testimony on the

first point proposed. Not a single writer appears to have entertained a doubt, that the most successfully vaccinated persons are liable to be attacked by small-pox. And although some have given other names to the disease, as it appeared in vaccinated persons, than that of small-pox, yet it is manifest that the prevailing opinion is, that it was the same disease in the vaccinated and unvaccinated, differing only in degree, the morbid action being modified and disarmed of its malignancy by the change effected in the system, by the agency of vaccination. Hence the essayists in Scotland have, for the most part, denominated the disease as it occurred in vaccinated patients, by the name of modified small-pox. Epidemics have uniformly operated with various degrees of force on different individuals, in consequence of constitutional dissimilarity, or some other circumstance calculated to favour such variety of effect. So in vaccinated persons, such a peculiar constitutional impression has been induced by vaccination, as to exempt them from the fatal issue of small-pox, which, so generally marks its course in the unvaccinated.

That vaccinated persons are liable to attacks of small-pox, will abundantly appear from the following testimony, some of which is of the highest character.

Dr. Duncan, in his admirable review of Thompson on varioloid disease, expressly says, that the disease in vaccinated persons was really small-pox; that no one doubted it, as respected the unvaccinated and those who had not had small-pox; he thinks that vaccination merely modified the disease, and rendered it mild.

Edinburgh Medical and Surgical Journal, No. 63, p. 232.

The small-pox that prevailed near Edinburgh, appeared to attack indiscriminately, persons who had been previously vaccinated, those who had had small-pox, and those who had gone through neither.

Ed. Med. and Surg. Journal, No. 63, p. 232.

Dr. Jenner says, the constitution loses its susceptibility for small-pox in proportion to the degree of perfection in the vaccine pustule during its progress, and that the small-pox taken subsequently, is modified accordingly. *Ed. Med. and Sur. Jour.* No. 68, p. 476-7.

In Montpelier, Sweden, Switzerland, and Geneva, the same varioloid eruption has appeared in vaccinated persons; in those places it was considered a mild small-pox.

Ed. Med. and Surg. Journal, No. 63, p. 120.

In general, says the reviewer of Thompson, we believe it will be found, that a small proportion only of vaccinated persons exposed to the infection took the disease, while few unprotected persons escaped.

Ibid. No. 63, p. 232.

Vaccinated persons who had the modified small-pox in Edinburgh in 1817, had been previously exposed to the contagion of small-pox with impunity. It is hence inferred, that the small-pox of that year was peculiarly virulent in its character.

Ed. Med. and Surg. Journal, No. 63, p. 240.

At the end of the year (1819,) small-pox appeared, and at the same time, a modified small-pox which attacked none but the vaccinated. It generally existed where small-pox prevailed in the same house.

Ibid. No. 68, p. 342.

T. Owen, surgeon to the Welch Charity, relates four cases, in one family, of small-pox after vaccination.

Ibid. No. 66, p. 69.

Mr. Cross saw modified small-pox in persons who had been re-vaccinated and re-inoculated with small-pox virus, without effect.

Ibid. No. 66, p. 119.

In Norwich, six cases were discovered of small-pox running its course in successfully vaccinated persons. Six of Mr. Cross's correspondents mention having seen small-pox after cow-pox.

Ibid. No. 66, p. 120.

Mr. Hill reports some cases of small-pox after vaccination, that occurred in the military hospitals of the Edinburgh castle.

Ibid. No. 67, p. 208.

In addition to the above quotations many more might be given, equally direct to the point. We shall next, however, give some evidence to show, that the matter taken from pustules on the bodies of vaccinated persons who were subsequently attacked by small-pox, did really produce genuine small-pox in unprotected persons. If this circumstance shall appear to be amply supported by testimony, additional evidence will thus be given to prove the liability of vaccinated persons to be attacked by small-pox.

Sir Gilbert Blane says, I know by my own experience, as well as from the testimony of others, that the matter of the small-pox pustules, after vaccination, will by inoculation give the small-pox; hence, he says, we can hardly deny it the name of small-pox.

Lond. Med. and Surg. Transact. vol. x. p. 330.

The matter taken from the pustules on those who had formerly been vaccinated, will produce small-pox.

Thomas's Practice, p. 251.

The matter of the mild form of the disease, or the varioloid disease, that affected vaccinated persons, produced the malignant small-pox in unvaccinated persons.

Ed. Med. and Surg. Journal, No. 56, p. 521.

M. Pougens, a French physician, proved in 1817, that the pustules of the varioloid disease that affected vaccinated persons, do produce regular small-pox in unvaccinated persons.

Ibid. No. 63, p. 230.

Mr. Cross and others do not doubt, that the vaccinated who were attacked by the epidemic, had really the small-pox, though modified; they proved this by inoculating others with matter taken from these patients; regular small-pox was produced.

Ibid. No. 66, p. 123.

The reviewer of Mr. Cross says, the evidence that small-pox can be produced from the matter of pustules, taken from vaccinated persons who were attacked by the epidemic, is so great as to set this question at rest for ever.

Ed. Med. and Surg. Journal, No. 66, p. 123.

We have nothing to do at present with the true explanation of the fact, that pustular matter taken from vaccinated persons, labouring under a mild, because modified small-pox, will produce the genuine form of that disease. It is sufficient for our present object, that the fact is so, and that the evidence is decisive of the liability of those who have been vaccinated to attacks of small-pox.

The other part of the first proposition relates to the final issue of the attacks of small-pox in those who have been vaccinated. Do such attacks prove fatal?

In replying to this query, it will be proper to notice the manner in which small-pox affects vaccinated persons. The term *varioloid*, which some have applied to this disease, signifies, resembling variolus, or like small-pox. And in explaining the points of controversy to our patients, it may be well enough to employ this term to denote small-pox in vaccinated persons. But as medical men, we must regard this epithet as a mere name, indicating not a new disease, but merely a modified form or mild species of small-pox.

The attacks of small-pox in vaccinated persons come on, and for awhile progress, as they do in unvaccinated persons. They are sometimes attended with high fever and a thick crowded crop of *papulae*, such as precedes the most severe and dangerous cases of confluent small-pox. This state of things continues till the fifth day from the eruption, at which time the *papulae* begin to be converted into small sized pustules. The disorder then abruptly stops short. On the following day, the fever is found to have subsided,

with a shrivelling and dessication of the eruption, and recovery proceeds without the least danger or inconvenience. The face is marked for some time after with brown spots, but without pits. Such is the general course. What forms the strong line of distinction from the small-pox in the unvaccinated, is, that with a few exceptions, it does not proceed to maturation and secondary fever, which is the only period of danger. Such is the account given by Sir Gilbert Blane, and we believe it to be the most correct.

Another writer observes, that in almost every case where small pox has succeeded vaccination, it has been mild and of short duration. Vaccination seems to deprive small-pox of its malignity in such cases. *Report of London College of Physicians, for 1807.*

Dr. Akerly relates a case of small-pox after vaccination, which terminated without suppuration or scab.

New York Med. Repos. vol xiv. p. 35.

A few instances have happened of persons taking small-pox after having been vaccinated; but the pustules were always imperfect, and the disease died away in a few days.

Thomas's Practice, p. 251.

Small-pox after vaccination has been generally a mild disease; of many hundred thousand persons vaccinated, not a single well attested case has been known to us of fatal small-pox, after vaccination.

Report Eng. Vaccine Establishment.

Mr. Bryce says, the disease was attended with little or no eruptive fever; the eruptions were not numerous; few pimples suppurated, and they quickly dried away. While hundreds died around from the natural small-pox, none who had been previously vaccinated, were seriously ill or in danger.

Ed. Med. and Surg Journal, No. 56, p. 467.

The varioloid disease, or modified small-pox, did not pursue the usual course of small-pox. It was not attended with secondary fever, and the eruption seldom had the smell of small-pox.

Ibid. No. 56, p. 519.

Of the many cases of modified small-pox in vaccinated persons that occurred in Montpelier, Sweden, Switzerland, and Geneva, not one is said to have proved fatal.

Ibid. 63, p. 230.

A long list of physicians is given, in the review of Thompson on varioloid, who saw the modified small-pox in vaccinated persons, not one of whom reports a fatal case. *Ibid. 63, p. 230.*

The modified small-pox prevailed at Lanark, at the same time it existed in Edinburgh. Five cases proved fatal, but not one of these had been vaccinated.

Ed. Med. and Surg. Journal, No. 57, p. 657.

Only six cases have been recorded, during the epidemic of the last three years, of death, from what was conceived to be small-pox, after vaccination, and some of these were doubtful.

Ibid. 63, p. 240.

In Norwich there were 10,000 vaccinated persons at the time the epidemic prevailed; 530 died of small-pox, only two of whom were vaccinated persons.

Ibid. 66, p. 127.

Mr. Cross says, no secondary fever attended the modified small-pox.

Ibid. p. 122.

Epidemic small-pox prevailed in the kingdom of Wirtemberg in 1814, 15, 16, and 17, that affected the vaccinated as the epidemic did in Scotland. From official returns made to government, it appears, that while tens of thousands of vaccinated persons escaped, only two died of small-pox, who were registered as having been properly vaccinated.

Ibid. p. 123.

Facts similar to the above were observed in Rotterdam in 1817, 18.

Ibid. p. 123.

Of sixteen cases of natural small-pox; at Cupar, in Fife, six died; while out of fifty-four cases of small-pox in vaccinated persons, but one died, and that was a doubtful case.

Lond. Med. and Surg. Transact. vol. x. p. 329, 330.

The number of deaths, from small-pox, in a given number of vaccinated persons, is not near so great as in an equal number of persons inoculated for small-pox.

Report of College of Physicians, London, 1807.

From all the authorities adduced, it would appear that small-pox, in any shape, rarely proves fatal when it attacks those who have been successfully vaccinated.

The second proposition comes next to be noticed, viz.: Does the evidence, on the whole, warrant our continued confidence in vaccination, as the only preventive of the ravages of small-pox? We answer, unhesitatingly, that if we had no further testimony than has been already adduced, vaccination would be completely triumphant. But to place the matter in its true light, we shall add a few more facts, for the purpose of, first, showing how small the proportion of vaccinated persons is, who have been attacked by small-pox in any form. Secondly, we shall make it appear, that small-pox does not certainly exempt any one from an attack of that disease. And, thirdly, we shall contrast vaccination with inoculation for small-pox, and with small-pox in the natural way.

First, we are to show that the proportion of vaccinated persons

who are attacked with small-pox in any form, is very small. And for proof of this position, we shall rely on the authorities previously referred to.

One of the foreign vaccine establishments reports, that of 2,671,662 persons who had been properly vaccinated, only seven had afterwards the small-pox. *Eclectic Repertory*, vol. viii. p. 529.

One hundred thousand persons were vaccinated in India, by M. Dubois and others, not one of whom took the small-pox afterwards. *Ibid.* vol. ix. p. 130.

Of 46,662 persons who were vaccinated at the London Small-Pox Hospital, but one had the small-pox in any form.

Jour. of For. Med. Sci. and Lit. vol. i. p. 122.

Up to 1820, more than 60,000 persons have been vaccinated by the English Vaccine Establishment, only five of whom are reported to have had small-pox. *Ibid.* 122.

During nineteen years only two cases having any resemblance to small-pox, have occurred in the vaccinated patients of the London Foundling Hospital. *Ibid.* 122.

In the Royal Military Asylum, where children of soldiers to a great number are brought up, not a case of even the mildest small-pox has occurred after vaccination. *Ibid.* 122.

Mr. Cross kept a register of six hundred and three persons, during the prevalence of the epidemic at Norwich, of whom ninety-one had been vaccinated. Of the latter three only were attacked, and they had the mild form of small-pox.

Ed. Med. and Surg. Journ. No. 66. p. 118.

Mr. Cross thinks that of vaccinated patients, not more than one in twenty are in any way affected by the most intimate exposure to small-pox, and that less than one in fifty have even the modified disease. *Ibid.* p. 121.

From these authorities, it would appear, that vaccinated persons are not very frequently attacked by small-pox in any form; but as we have shown that the disease in these persons is almost uniformly mild, and very rarely fatal, vaccination would be entitled to our highest confidence, even though every vaccinated individual were liable to such attacks.

But we are to make it apparent, that small-pox does not certainly exempt any one from an attack of that disease. And so numerous are the facts on this point, that it would seem almost superfluous to attempt its proof, if there were not, even at this day, some who declare that the stories of small-pox occurring twice in the same individual, are mere fabrications. There are few physicians in

this city of any considerable experience, who cannot bear testimony to this fact. But in order to put the matter beyond dispute, we shall adduce a few authorities directly in point.

We have more instances on record of persons suffering severely, nay fatally, from a second attack of small-pox, than from small-pox after perfect vaccination.

Ed. Med. and Surg. Journ. No. 56, p. 467.

A man who believed himself to have had small-pox, lived twelve years as nurse in an establishment near Norwich, for inoculated persons, continually waiting on those who had the disease, and at the end of that time, caught the small-pox and died.

Ibid. No. 66, p. 119.

Sir Gilbert Blane records two cases of small-pox occurring twice in the same persons.

Lond. Med. and Surg. Trans. vol. x. p. 328.

Mr. Trye asserts, "from my own experience, I can declare, that whatever has been said of the insufficiency of cow-pock matter as a security against small-pox, may be equally said of small-pox matter as a similar security." He then states two cases of true small-pox attacking the same persons twice.

New-York Med. Repos. vol. viii. p. 342.

Dr. Akerly relates a case of small-pox attacking the same person twice.

Ibid. vol. xiv. p. 32.

A multitude of examples has been published of small-pox having attacked the same persons twice, which facts are so common as no longer to excite particular attention. *Dewar's Tract*, p. 71, 74.

Mr. Hennen records similar cases, and notes at least fifty authorities, to prove the same thing. This fact was known in the tenth century, when, of course, those who had the small-pox twice, must have had it both times in the natural way, as inoculation was not then practised.

Ed. Med. and Surg. Journ. No. 56, p. 459.

Peter Forestus, of the sixteenth century, gives the cases of his own son and others, who experienced a second attack of small-pox. A son of Fracastorius, the poet and historian of Verona, who lived about the same time, suffered also the same repetition of small-pox. Willis and Diemerbroeck record similar events.

Burserius relates the case of a man who was three times attacked by small-pox.

Institution Medicin.

Thompson says small-pox occurs twice in the same person much oftener than is imagined.

Ed. Med. and Surg. Journ. No. 56, p. 523.

The report of the National Vaccine Establishment (English)

for 1818-19, states, that in the last year, twenty-seven cases of secondary small-pox had been reported to them.

Ibid. No. 63, p. 242.

To quote further proofs of this important position, must be unnecessary. No one, who is not led blindfold by prejudice, can resist the evidence in its favour. It is impossible to object to the ancient writers, who have recorded cases of secondary small-pox, that occurred at periods in which no party feelings prevailed respecting inoculation or vaccination. Their testimony must be regarded as the voice of unprejudiced truth. And the result of it is, whatever may be said of vaccination, that small-pox is not an absolute preventive of small-pox.

It remains for us to contrast vaccination with inoculation for small-pox, and with small-pox in the natural way. And here we would again observe, that if every vaccinated person were to experience an attack of small-pox in the mild and comparatively harmless form in which, as we have shown, it does affect such persons, we would be prepared to maintain the assertion already made, that vaccination is the only known preventive of the mortality of small-pox. But the more closely we contrast this noble agent with inoculation for small-pox, the deeper will be our conviction of its vast superiority. Does inoculation expose its subjects to a disagreeable and often destructive disease? Vaccination, on the contrary, is mild and harmless in its progress in the animal economy. Does inoculation expose all, within the sphere of the small-pox contagion, to attacks of that disease by the natural process? Vaccination injures neither the individuals vaccinated, nor any others with whom they have intercourse. But as authority is better than our simple assertion, we shall again resort to it for the illustration of our position.

In Shottisham, England, no case of small-pox has occurred for sixteen years, during which time vaccination has been almost universally practised. In Denmark, legal authority enforces vaccination, and small-pox has not occurred there for eight years.

The circle of Bezat, in Bavaria, contains half a million of people. Dr. Kraus affirms, that small-pox has never occurred there since 1807. Vaccination has been uniformly practised.

Jour. For. Med. Sci. and Lit. vol. i. p. 121.

Vaccination fell into disuse in London in 1817, to such a degree, in consequence of small-pox attacking vaccinated persons, that 1051 died in that city of small-pox; good sense, however, prevailed over

ignorance, and in 1818, vaccination becoming more general, the deaths from small-pox were only 421.

Lond. Med. and Surg. Trans. vol. x. p. 332.

To prove the utility of vaccination in Norwich, Mr. Cross's reviewer supposes the case of the ten thousand vaccinated persons in that city, to have been that of so many persons inoculated for small-pox; agreeably to the usual calculation, one in three hundred would have died, so that there would have been thirty-three deaths, whereas, in the actual case, there were but two.

Ed. Med. and Surg. Journ. No. 66, p. 127.

In Copenhagen alone, five thousand five hundred persons died of small-pox between 1788 and 1800; after this, vaccination was introduced, and from 1802 to 1818, only one hundred and fifty-eight died of that disease, in the whole Danish dominions. *Ibid.* p. 131.

Two-thirds of the persons who apply for relief at the Indigent Blind Hospital in London, lost their sight by small-pox.

Lond. Med. and Surg. Trans. vol. x. p. 326.

From 1804 to 1818, it is computed that twenty-three thousand one hundred and thirty-four lives have been saved in London by vaccination, compared with the effects of inoculation in the preceding fifteen years.

Ibid. p. 322.

Small-pox has destroyed one hundred persons for every one that has perished by the plague.

Ibid. p. 326.

Formerly two thousand persons died annually in London of small-pox; in 1812, such was the effect of vaccination, that the deaths were only seven hundred and fifty, although the population had increased within two years 133,129.

New-York Med. Rep. New Series, vol. i. p. 209.

One person in every three hundred dies of small-pox by inoculation; while less than one failure in a thousand happens to vaccination.

Ed. Med. and Surg. Journ. Ibid. No. 56, p. 465.

In Bavaria, almost every child is vaccinated. In 1800, no less than sixteen hundred and nine persons died of small-pox. From 1809 to 1818, vaccination being general, not one died of small-pox.

Ibid. No. 66, p. 131.

In Prussia, forty thousand died annually of small-pox, before the introduction of vaccination. In 1817, the deaths from small-pox were under three thousand, although considerable accessions of territory had been made. Vaccination is enforced by law.

Ibid. p. 132.

Inoculation keeps up a constant source of contagion, and increases the number of deaths from the natural disease.

Report Lond. College of Phys. 1807.

When inoculation was in full operation in London, the deaths from small-pox were ninety-four in one thousand.

Lond. Med. and Surg. Trans. vol. x. p. 318.

Mr. Hennen says, the whole series of cases I have given, present the most triumphant evidence in favour of vaccination, and place in a most conspicuous point of view, the infinite advantages to be derived from the process, when judiciously conducted.

Ed. Med. and Surg. Journ. No. 55, p. 456.

The preventive operation of good vaccine virus is, on the most moderate estimate, as certain and efficacious against the small-pox, as the small-pox is against itself, in either the inoculated or natural form.

Report Nat. Institute, 1812.

If vaccination does not prove an infallible preventive of small-pox in *all* cases, neither does the previous existence of small-pox itself, act as an infallible preventive of its recurrence.

Ed. Med. and Surg. Journ. No. 56, p. 459.

The reviewer of Thompson on varioloid disease, thinks that the late epidemic has had the effect of limiting confidence in the *preventive* power of vaccination, but that it has extended and confirmed our knowledge of its *modifying* power, and that although it threatened to destroy vaccination, it has ended in promoting and establishing it.

Ibid 63, p. 242.

Mr. Bryce says, the history of this epidemic (Small-Pox in Scotland) must be considered as the history of the triumph of vaccination.

Ibid 56, p. 467.

In the course of this inquiry, we have abstained from speculative remarks, because we believe that the cause of vaccination can better be defended by resorting to facts, than in any other way. From the whole view of the subject, we are urged to the conclusion, that although vaccination does not absolutely and uniformly prevent the attacks of small-pox, yet such is the harmless character of the disease, when it does affect vaccinated persons, such the mild and innocent nature of vaccination itself, such the disagreeable character of small-pox under the most favourable circumstances of inoculation, and such the horrid effects of that disease, even in some inoculated persons, and in very many who take the disease in the natural way, that we cannot but decide in favour of vaccination, as the only agent yet discovered, that can prevent the direful ravages of that scourge of humanity, the small-pox.

If the view which we have taken of the case be correct, how is it possible that any medical man can attempt to revive the practice of small-pox inoculation? What, though vaccinated persons are

liable to be attacked by small-pox, if, in consequence of the vaccine process, their systems be insusceptible of any other than a mild and harmless form of that disease? Is it not better that vaccination should prevail, even though every vaccinated individual should experience an attack of small-pox, so modified as scarcely ever to prove fatal, than that one in every three hundred of the human race should be made the certain victim of variolous inoculation? We should really suppose, that the bare mention of these interrogatories would be an insult to men of good sense, did we not know, that a few individuals, of high standing, have entertained doubts on this subject. For ourselves, we have no hesitation in declaring, that vaccination, as a preventive of death from small-pox, is as fully entitled to our confidence, as it ever has been at any period since it was proclaimed to the world by the illustrious Jenner.

With respect to the rumours in Baltimore concerning the failure of vaccination, it is proper to observe, that the writer has had information from several respectable physicians in that city, whose testimony is most conclusive in favour of the efficacy of vaccination to prevent the calamitous evils incident to small-pox. They appear to have had their confidence in vaccination increased, rather than diminished, by the facts that have been lately disclosed amongst them.

ART. V. *Observations on the Vaccine and Varioloid Diseases.* Communicated by JAMES DAVIS, M. D. of Columbia, South Carolina.

I OFFER you the following communication, not only because it seems to corroborate the observations of Dr. Jenner and others, that the simultaneous existence of cutaneous diseases, with the vaccine pock, has a tendency to vitiate the virus of the latter disease, and render it unfit for communicating the true kine-pock; but, moreover, because it would appear that the vaccine matter is liable, from this circumstance, to be converted into a virus of a totally different character.

At this time of day, it would seem to me, there is no resisting the weight of testimony in favour of genuine vaccination, as a protection against the true small-pox. We have recently received

the unpleasant intelligence, however, that a new disease (the varioloid) has made its appearance in Europe, and in our own country, which, as a most afflicting and dangerous scourge, threatens to pervade the civilized world; and against which, neither the true kine-pock, nor yet the true small-pox, seems to afford absolute security. Nevertheless, from the history of this new disease, as far as we have yet learned from authorities not to be discredited, the vaccine disease, so far from having its utility and importance diminished, still demands our highest consideration, as promising to afford us more complete protection, not only against the small-pox, but also against the varioloid disease, than any other known agent. Although the *genuine* vaccine pock may not afford absolute protection against the *invasion* of the varioloid disease; yet, it appears, from the observations of Dr. Thompson of Edinburgh, and of Dr. Cross of England, that it exercises a powerful influence over it, by the prevention of mortality. According to the accounts of these gentlemen, the deaths occasioned by the varioloid in England and Scotland, since the year 1819, amongst those subjects who had neither had the small-pox, nor the kine-pox, have been in the ratio of one to four; amongst those who had before had the small-pox, in the ratio of one to twenty-two; and amongst those who had previously undergone the vaccine disease, only in the proportion of one out of two hundred. These observations, most assuredly, speak even higher praise for the vaccine pock, than any thing we have hitherto known concerning it: and, inasmuch as it behoves us carefully to investigate every subject which, in any degree, promises, to either arrest the progress, or mitigate the violence of the varioloid disease, so it is our interest, as well as our duty, to endeavour to render ourselves more intimately acquainted with every coincidence which, in any possible manner, may so tend to vitiate or modify the vaccine matter, as to render it unfit for communicating the genuine disease, or so to change its nature, as to communicate a new affection. Instead, therefore, of suffering our hopes, in the protecting influence of the kine-pock, to be damped or diminished, or our ardour to cool in the investigation of the laws by which it is governed; it would seem that we are called upon, in stronger terms than ever, to awaken a more general vigilance and increased attention to every circumstance, which, in any manner, may have an influence in deteriorating or modifying its effects on the human system. Instead

of declaiming against its efficacy, we ought to endeavour to qualify ourselves more eminently for communicating the *pure* and *genuine* vaccine pock : and thereby avoid inflicting an injury on the delicate reputation of this invaluable discovery, and escape the mortifying evil of betraying the confidence of our fellow citizens, and lulling them into a false security, by propagating a disease, which can offer protection, neither against the small-pox, nor against the varioloid disease.

I extract the following case from my note book.

On the 29th of June, 1814, I vaccinated master James D. Montgomery, æt. 18 months, son of Dr. B. R. Montgomery, professor of moral philosophy, &c. in the South Carolina college, together with six other healthy children. I had obtained the matter that I made use of from Dr. Smith, of Baltimore. James D. Montgomery had been labouring under a cutaneous disease (the *strophulus intertinctus* of Willan) for about three months. It had resisted every remedy which I had prescribed for it, and by this time had literally spread over the whole surface, so as to render it difficult to find a sound spot on the arm, large enough for making the insertion. I should have been deterred from vaccinating in such a case, but for a remark of Dr. Jenner, viz. "that vaccination, although not very certain to take in cases of cutaneous eruption, yet, where it did take, it was curative of the cutaneous disorder." Upon this information, I recommended it to Dr. Montgomery, who readily acceded to the experiment. The vaccine failed to take effect in every one of these cases, except in that of J. D. Montgomery; and in his case, it was really gratifying and delightful to observe the effect of it on the cutaneous disease. As the vaccine pock advanced, the affection of the skin disappeared, and that in a very exact proportion to each other; so that, by the time the pock was mature, the cutaneous disorder had entirely gone off. From fifteen to twenty-five days after the kine-pock had been in its full course, he was afflicted with two abscesses, one on his back, and one on his breast, which discharged from half an ounce to an ounce of laudable pus; since which time he has remained in sound and perfect health.

His pock proved to be anomalous, and whether it were sufficient to protect his system against the small-pox has not since been tested. But from the constitutional symptoms which I attentively

observed, I am very much inclined to believe, that as to himself, it was effectual.

The virus manifested no signs of having taken effect until the eighth day, when the small inflamed point at the puncture first appeared.

The areola did not progress from day to day with regularity, nor was it at any time sufficiently circumscribed, having some radii considerably longer than others. Its colour was a coarse red, instead of that beautiful fine blush, which the genuine vaccine generally exhibits.

The pock, although of the ordinary size, and of a concave surface, was destitute of that cordon of bead-like vesicles, which form around the corona of the true kine-pock. It was peculiarly dry, insomuch that it was difficult to obtain from it as much lymph as would serve for further vaccination.

Four healthy children (white and black) of the family of Dr. E. D. Smith, professor of chemistry, &c. were vaccinated from this pustule. I had expressed an opinion, that although I believed the constitution of little master Montgomery was secured against the small-pox, that, nevertheless, I doubted of the efficacy of the matter of his pustule to communicate the true disease. As matter, however, was hard to be obtained, and as it was conceived no danger could result from it, the doctor determined on making the trial. It failed to produce any effect whatever on all, except on one of the doctor's own children. In this case, the puncture began to inflame within the first fourteen hours. The inflammation spread rapidly, accompanied with innumerable papulous eruptions over the inflamed surface, exuding a profuse quantity of gelatinous matter. It continued to spread for about thirty hours, assuming, in its progress, rather a formidable appearance, and exciting a good deal of alarm, until it occupied a space larger than five or six areolas of the true pock; extending over the one more longitudinally than laterally. Aperients were administered, and the topical affection fomented with a decoction of chamomile flowers, and in about forty-eight hours it had totally disappeared; having exhibited no sign whatever of any thing like a pock. There was no constitutional disturbance accompanying the local affection. The child remained in perfect health, and has undergone the kine-pock by a subsequent vaccination.

This case evinces two facts in a clear and decided manner, to wit: that the vaccine disease is capable of effecting the cure of cer-

tain inveterate diseases of the skin; and that certain diseases of the skin may exert such an influence over the vaccine matter, as not only to vitiate and render it unfit for communicating the true kine-pock, but also absolutely to change and convert it into a poison of a new and unknown character. Two facts of great practical importance, and which, perhaps, deserve more investigation and scrutiny, than they have hitherto received.

The influence of the kine-pock over cutaneous disorders, is an old remark; and the influence of the diseases of the skin, in vitiating the matter of the kine-pock, and rendering it unfit for communicating the true pock, is equally old. But its liability to be converted into a poison of a different nature, productive of singular and anomalous affections, in consequence of being blended with certain cutaneous disorders, is a subject which has not hitherto attracted as much attention as it merits. In this instance, the cutaneous disease of master Montgomery, obviously occasioned a conversion of the vaccine matter into a new kind of virus, producing a new and singular affection. It is true, it proved to be a mere topical affection, and terminated without any serious consequences; but, as the vaccine matter is liable to be changed by one form of cutaneous disease, is it not reasonable to conclude, that it may also be changed by others? And although, in this particular case, it was changed into comparatively an innocuous virus, have we any evidence, that in blending with some others of the multifarious affections of the skin, incident to mankind, it may not become converted into a virus of the most deleterious and destructive operation?

All this, however, indicates nothing against the utility and importance of *genuine* vaccination, but only shows how important it is that it should be practised with a care, circumspection, and skill, with which the prevailing custom of our country at present is utterly incompatible; and until there shall be a reform effected in this respect, it will be in vain to look for the full extent of those beneficial results to mankind, which the kine-pock is unquestionably calculated to afford. The attainment of these results, in strict conformity with the laws of our condition in the attainment of every other great and important good, is beset with difficulties; nevertheless, we have no reason to suppose that these difficulties are insuperable. Every year brings to light some new facts, which enable us to approach nearer and nearer to the attainment of the desired

object. And as one principal obstacle to the improvement of our knowledge of this subject has been the apathy, indifference, and even levity with which it has been received by a great majority of the community; so, when, perhaps from severe afflictions and scourges, or from any other causes, this supineness and indifference shall be removed; then the march of improvement will be rapidly accelerated, and great and permanent advantages will be the happy result.

Would it not be a wise precaution, and worthy of legislative provisions, to impose a penalty on any one who should communicate the vaccine disease from an unhealthy subject?

ART. VI. *Observations on the use of Podophyllum Peltatum, or May-Apple, and the Apocynum Androsæmifolium, or Canada Dogs-bane.* By WILLIAM ZOLLIKOFFER M. D. of Middleburg, Frederick County, Maryland.

MANY may conclude, from the length of time that has elapsed since the discovery of the medicinal properties of the root of the *Podophyllum Peltatum*, that nothing more interesting than what has already been said upon the subject can be offered; and that, consequently, all attempts towards making any further remarks on its utility as a valuable indigenous production, would be considered altogether superfluous.

Opinions like this, instead of being calculated to deter us from making the necessary exertions incumbent upon us as practising physicians, are only properly and usefully suited to stimulate us to the use of every laudable exertion, to discover the many useful and invaluable properties, that doubtless many of our indigenous vegetables possess.

America has been blessed by a kind Providence, with a very great number of native productions, belonging to the vegetable kingdom. A far greater number perhaps possess valuable and useful properties, than what has already been noticed by the different writers on our indigenous materia medica: though but few of these have been sufficiently investigated, to enable the medical

public to place that confidence in them as remedies, which seems to be necessary, before they can be accepted and received as standard medicines, worthy of regard and attention.

If every physician who has had it in his power, would have but devoted an hour or two, occasionally, to the investigation of such plants as may have happened to come under his notice, the medical properties of a very great number, of which we as yet know but very little, would have, by this time, been established satisfactorily, and have been considered worthy of the particular attention of physicians generally throughout the United States.

But to revert more particularly to the subject: I have the following observations to make respecting the Rad. Podophy. Peltat.; more on account of its being a valuable substitute for the Rad. conv. jalap, and, indeed, as possessing advantages over this article, and as being easily procured by almost every country practitioner, at one-fourth of the expense. The country people, the generality of whom seem to be well acquainted with this plant, may procure the root in abundant quantities for the very moderate price of twelve and a half cents.

It is a well known fact, to all who have witnessed the variety of forms which bilious fevers occasionally assume, and to whose charge the treatment of these cases of disease have been committed, that the more drastic articles belonging to the class of cathartic medicines, such as the sub. mur. hyd. combined with the pulv. rad. jalap. &c. appear to be more slow and uncertain in their effects, than the milder saline purgatives. The sub. mur. hyd. cum jalap. I have frequently (during the prevalence of the epidemic intermitting fever of the fall of the year 1821,) given in very large doses, and repeated, without any of its evacuating powers being in the least degree obtained, and have consequently afterwards had to give a solution of the sulph. mag. before my patient's bowels would become freely moved. The rad. podop. peltat. cum sub. mur. hyd. is seldom, in these cases, subject to this inconvenience. It will be found, when given in the dose of fifteen grains of the former, and ten of the latter, in the generality of cases, productive of the happiest results. It is by no means so subject to produce griping as jalap and calomel when combined, though perhaps rather more apt to operate sursum et deorsum. From its use for a very considerable length of time, I have not been able to discover that this root possesses any anthelmintic properties, though I have, in a variety

of cases, given it a fair trial, in order to satisfy my mind upon the opinion of its supposed vermifuge qualities. I have sometimes given it alone, but have not found it as useful as when combined with the mur. hyd. nit. 2640 grains of the recent root lost in drying 1620 grains, and from 5126 grains of the recent root, I obtained 300 grains of alcoholic extract; and from the same quantity of recent root, 377 watery extract. These extracts possess considerable activity.

THE genus *Apocynum*, of which but eleven species as yet appear to be noticed by botanists, belongs to the class *Pentandria*, order *Digynia*, and is of the natural order *Contortæ*. The species which is the subject of this paper, seems to possess some properties, which, I think, certainly entitle it to no small share of attention. According to Walter and Michaux, it is an indigenous plant, growing naturally in Canada and Virginia. It is likewise to be found in the greatest abundance in Maryland, where it is recognised by the common and local appellation of silk-weed, milk-weed, snake's-milk, &c. and by the peasantry is supposed to possess noxious properties. Every part of the plant as well as the root emits, upon the slightest incision, a milky-like substance, which, when procured in the form and consistence of gum elastic, and submitted to the flame of a lighted taper, burns with very great vividness, exhibiting a flame, in appearance much like that of the *spt. vini rect.*

Botanical Description.—The root of this plant, which is the part employed for medical purposes, will not unfrequently be found to measure three inches and a half in circumference, and four feet in length. It is perennial and creeping; and sends out many thick, erect, firm, smooth stalks, of a brownish colour; the leaves are pretty large, smooth, and nearly oval, partially veined, of a deep green colour, and grow oppositely by pairs at the joints: the stalks are terminated by large tufts or umbels of flowers; filaments five, alternate with the stamina; "each flower is of one leaf, divided into five parts at the brim, and the nectarium is singular and conspicuous: the real ground of the flower is white, but the nectarium is purple, reddish, or of a chocolate colour; numbers of these will be gathered into a head, so that they form a moderately large umbel."

Sensible Properties —The root has rather a disagreeable smell, and a bitterish nauseous taste.

Medical Virtues.—The *Apocynum Androsæmifolium* attracted my attention in the summer of 1817, when, after procuring a suitable quantity of the root, I determined to submit it to a course of experiments, the result of which I noticed in a very succinct manner in a small work which I wrote, and published in the year 1819, entitled “a *Materia Medica* of the United States, &c.” From the attention that I gave to this subject, I perceived that it possessed considerable tonic properties, the action of which depended entirely upon the dose in which it was given; as also that of a valuable emetic, certain, prompt, and effectual, in its influence upon the coats of the stomach; rarely occasioning the unpleasant vertigo, and other serious effects, that too frequently accompany the use of some of our indigenous articles belonging to this class of remedies. I have given it in a number of cases of loss of appetite, accompanied with general debility, with decided benefit, in doses of from fifteen grains to twenty, twice and thrice a day. I am in the habit of exhibiting it in the form of the powdered root, which is to be dried carefully in the shade.

The proper dose in which it should be administered when given with the view of its producing its effects as an emetic, is from thirty to forty grains at once, or in divided doses of ten grains each, which may be taken every fifteen minutes until it operates. It will be found an invaluable substitute for the pulv. ipecacuanha; when given with a view of exciting diaphoresis, in a combination with opium, in a form somewhat similar to the pulv. dov. which is as follows:

℞. Pulv. Cort. Rad. Apocy. Androsæ	ʒi.
Pulv. Gum. Opii	ʒss.
Pulv. Nitræs Potassæ	ʒss.
M.	

In cases of acute rheumatism, when, after venesection has been freely resorted to, with the use of suitable cathartics, a dry surface still continues, this formula, given in doses of ten grains, will seldom fail to induce a general diaphoresis. I have in my note book two cases of pneumonia, in which venesection had been liberally used; and the pulv. conv. jalap. cum sub. mur. hyd. until the bowels were freely evacuated, without any visible relaxation upon

the surface (though some alleviation of the pain), when I thought it advisable to give ten grain doses every three hours, which ended in a profuse and copious diaphoresis. Also one case of phrenitis, in which I used it with the most decided benefit.* I hope the attention of physicians will be more generally turned towards this article.

Chemical Investigation.—From 2536 grains of the recent root, I obtained 1726 grains of cortex or bark, and 310 ligneous or roody part. The active properties remain principally in the bark. From 3240 grains of this bark, I obtained 178 grains alcoholic extract, and 28 watery; and inversely from the same portion of root, 160 watery, and 104 alcoholic extract.

Domestic Uses.—"The pods of all the sorts are filled with seeds, which are for the most part compressed, and lie over one another imbricatim, like the tiles of a house; these have each a long plume of a cottony down (like cowhage) fastened to their crowns, by which when the pods are ripe and open, the seeds are wafted by the wind to a considerable distance, so that the plants become very troublesome weeds. This down, however, is in very great esteem in France for stuffing easy chairs, making quilts, &c. being exceedingly light and elastic; it is called *delewad*." (Shecut's *Flora Carolinænsis*.)

ART. VII. *A brief Sketch of the Weather, and Diseases of the City of Washington, from May 1st to November 1st, 1821.* Communicated by DR. HENRY HUNTT, of that city.

THE weather during the month of May was generally pleasant, accompanied with frequent showers of rain, thunder and lightning. Mean height of the mercury (agreeably to Fahrenheit's Thermometer) at two o'clock, P. M. for the month, $71^{\circ} 93'$.

Early in this month intermittent fevers prevailed, particularly among those persons who were afflicted by this disease last fall. Afterwards *scarlatina anginosa* made its appearance among the children, but the disease was not as plainly characterized as I have usually seen it. The first case which came under my care was

* One case of inflammatory rheumatism which I have reason to think was relieved by the use of this preparation, though any other sudorific might have had the same effect. These cases I have stated to show that this vegetable is not inactive.

mistaken for measles : it proved very obstinate, and terminated favourably by a discharge from the ears. Other cases followed, more plainly defined, and more easily controlled. Afterwards the disease changed its character, and was attended with an anomalous eruption wearing somewhat the character of chicken-pox, without any affection of the throat. This form was also mild, and in many instances required no medical aid. At length the disease degenerated into *sore throat*, without any eruption, and then became more serious and alarming.

It was my intention to take only a cursory view of this epidemic, but as the character of the disease may be considered doubtful, I shall be more minute in my detail.

Wilson, Clark, and Rush, all agree that scarlet fever may prevail, attended in some instances with eruptions, without sore throat; in others, with sore throat, without any eruption. My opinion of this disease was confirmed by governor Miller, who arrived in this city before the middle of the month, and stated, that scarlet fever prevailed in Arkansas two months before, and he could trace it throughout his journey to this place. Since then, I have heard that this disease gradually progressed to the north and east. In taking a view of this epidemic, we will pass over its first appearance, and advert particularly to its last form, which was most predominant, and excited most alarm.

In general, this disease was rapid in its progress, terminating either favourably or otherwise in a few days, and observing remissions in the morning, and exacerbations in the evening. It was confined mostly to children between one and twelve years of age, but I did not meet with a single instance where a child at the breast had the complaint. Some grown persons (particular women) had symptoms very similar to it. In most cases, the complaint was ushered in by an uneasy sensation in the throat, flushed countenance, and some fever. Upon examination, the fauces were affected with an erysipelatous inflammation, which extended to the velum pendulum palati and uvula. If the disease was not quickly checked, the tonsils became swelled, with white specks or sloughs upon them, which continued to extend, with increased fever : pulse frequent, but not tense.

In some instances, the affection of the tonsils increased, until covered all over with one general slough, and the inflammation seemed to pervade the trachea and lungs, but these symptoms did

not often attend the disease. In other cases, a swelling of the maxillary and parotid glands, followed the inflammation of the fauces, and produced difficulty of breathing. When these symptoms occurred, the disease was more readily subdued, although the appearances were most threatening in the commencement. In the latter stage of the disease, some cases were accompanied with a discharge of thick mucus from the nose, and an eruption about the upper lip; others with pustules about the neck and breast, very similar to *chicken-pox*. Several cases terminated in abscesses of the tonsils, which produced difficulty in swallowing; these symptoms were urgent and alarming, but they always disappeared on emptying the abscesses, and convalescence quickly followed.

I will now proceed to give the method of cure which was most successful in this disease, as far as it came under my care and observation. In the first place, a vomit of ipecac. or tart. emet. joined with calom. was never omitted, which frequently, by an early and active operation on the stomach and bowels, completely checked the complaint. In all diseases, but particularly in this, the early efforts of the physician should be prompt and energetic; by this means, the complaint may be either subdued in its forming state, or we thereby gain such an advantage as to place it fairly under our control.

After the operation of the emetic and calomel, the bowels were kept free by epsom salt, or some other gentle purgative. If the white specks, or sloughs appeared, a gargle of vinegar and water, slightly impregnated with common salt, was directed, and calomel was again given in *full purging* doses; the operation of this medicine was evidently more free, and effectual, than any other purgative which was given in this complaint; besides, it appeared to have a peculiar effect in cleansing the throat.

A variety of gargles were used, agreeably to the progress and indications of the disease; such as an infusion of bark with sulphuric or muriatic acid; a solution of nitrate of potass or alum; lime water, and the infusion of capsicum; (I have seen much injury done by using severely stimulating gargles, in the *early stage* of sore throat). Great benefit was derived from the vapour of warm vinegar and water, applied to the internal fauces.

Sometimes the stomach became very irritable during the paroxysm of fever; in those cases, purging glysters, aided by the warm bath, and stimulating cataplasms to the feet, afforded relief,

and in a few hours the stomach would regain its tone, and be in a state to receive medicines.

Blisters to the throat were used with great advantage, in the second and last stages of the disease, after proper evacuations; but, even then, it was necessary to repeat them, or to keep up the irritation and discharge by other means. In some cases, bark was indicated after the third day; but it was necessary to suspend the use of it during the afternoon, as the febrile symptoms generally increased towards evening.

Whenever the tonsil glands suppurated, the abscesses were punctured, as soon as discovered, unless they were situated too deep to be reached; in such cases, the exhibition of gentle emetics produced immediate relief.

During the last stage of this disease, but little medicine was required, and my attention, then, was directed to a cordial and nutritious diet. "In the practice of physic," says Dr. Armstrong, "we ought never to forget, that there is a tendency in nature to remedy the remains of many disorders, and it is certain, that exhausted patients may be readily destroyed from an *officious* zeal of doing something when nothing was required." These remarks apply particularly to children, because their habits and tenacity of life, are not only calculated to resist and overcome diseases, but there is a peculiar tendency in their constitutions to revive, and convalesce, after such violent attacks.

June was very warm, with frequent showers of rain, thunder, and lightning. Mean height of the mercury at two o'clock, P. M. during the month, $81^{\circ} 36'$.

This month was considered healthy. The diseases were of a mixed character. Cholera infantum most generally prevailed. There were some cases of fever, attended with pneumonic affections. Other cases observed regular paroxysms, every day, preceded by a sense of coldness. In one instance, I visited a patient during the chill, and from the difficulty of breathing, and altered expression of the countenance, I was fully impressed with the idea, that death was fast approaching. By using warm applications and stimulating remedies, the patient soon revived, and a fever followed. These distressing paroxysms recurred about the same hour every day, with increased violence. From the state in which I saw the patient, I concluded, that another attack would, probably, prove fatal; and, therefore, determined to prevent it, if possible.

The next morning, the patient being free from fever, and under great apprehensions of another attack; bark, muriate of ammonia and opium, were given in full doses every hour, with stimulating cataplasms, applied to the extremities; by this means, the paroxysm was evaded. Some other similar cases, afterwards occurred, which were suddenly checked by the same remedies, and a rapid convalescence followed.

Some cases occurred where the patients were not confined, but complained of great lassitude, with slight febrile symptoms—tongue furred, with some pain and uneasiness in the head and breast. At first, it appeared, that the disease depended on a derangement of the digestive organs. The antiphlogistic plan was rigidly pursued, with blisters to the head and breast; afterwards, Abernethy's mode of treatment in the derangement of the digestive organs was tried, but very little advantage was gained from either, and the disease would obstinately pursue its course, and the strength of the constitution alone seemed to ensure the patient a favourable result.

July was very pleasant, accompanied with frequent rains until the latter part of the month, when the weather became very warm and dry. Mean temperature at two o'clock, P. M., for the month, $74^{\circ} 60'$.

The diseases which we had to contend with this month, were, principally, cholera infantum and dysentery. Some cases of bilious remitting fevers prevailed, but there was nothing remarkable in the characters of either.

August was oppressively warm and dry. On the 16th, the mercury stood at 95° at two P. M., and there was no rain until the 29th. Mean temperature, at two o'clock, P. M., during the month, $85^{\circ} 3'$.

The cases of disease increased daily. Cholera was more general and violent, than during any other month this season. Children were sometimes suddenly seized with severe puking and purging, which if not soon relieved, the little patients became exhausted, and death quickly followed. In *these* cases, evacuating remedies were abandoned altogether, and the only hope of relief rested on cordials, and stimulating applications to the skin. In other cases of this disease, the treatment was commenced with an emetic, followed by gentle cathartics and absorbents. Particular attention

was paid to the diet of the child, as well as that of the mother, (in cases of nurslings). The body was rubbed two or three times a day with ardent spirits, strongly impregnated with common salt, and stimulating cataplasms were occasionally applied to the stomach and feet; but our great reliance, at last, was placed on cordial and stimulating remedies.

Bilious intermitting and remitting fevers became more obstinate, and uncontrollable. In some cases the stomach was so irritable, that nothing could be retained for an instant; in these cases, the bowels were very torpid, and, in some instances, the stomach seemed to usurp the entire functions of the alimentary canal, and the secretion of the liver was suspended; neither purging injections, nor any other means would procure any alvine discharge: indeed I was at first induced to believe, that the patients laboured under intus-susception, or some other cause of obstruction; but on examining the abdomen, there was neither pain nor distention. When the deranged state of the stomach was subdued, (which opium alone seemed to effect,) the intestines and liver would regain their operations, and the alvine discharges gradually returned; at first very scarce, afterwards more abundant.

The diseases generally put on an intermitting form in the commencement, and bark and opium, properly administered at this time, would, almost in every instance, effect a cure. In all the diseases which prevailed this month, the great object of the physician was, to watch an opportunity to use tonic and stimulating remedies, otherwise the disease would pursue a tedious and lingering course, and in most cases prove fatal.

In September, the weather was very pleasant, particularly in the mornings and evenings. In the early part of this month, we had frequent and abundant rains; afterwards the weather was dry until the 30th. Mean temperature at two o'clock P. M., for the month, $76^{\circ} 53'$.

The cases of disease continued to increase. Bilious fever, in various forms, prevailed. In most cases an ague, either partial or general, preceded the fever: sometimes attended with violent spasmodic affections of the stomach and lungs. In several cases, death took place during the paroxysm. Opium in large doses, aided by hot applications to the stomach, generally relieved this affection, but I met with two cases, where every remedy failed

until 20 grains of ipecacuanha were administered, when instantaneous relief was afforded. Nearly all the diseases this month, assumed, in the commencement, an intermitting form, and if the paroxysm was anticipated by large and repeated doses of opium, a free perspiration was produced, and the complaint became subdued. The patients soon afterwards resumed their business, wearing the appearance of perfect health. If the disease, by this means, was not checked in the onset, like an unruly courser it became ungovernable, and the physician could do little more than observe its progress and wait its termination. Those who followed the indiscriminate practice of bleeding and calomel, and determined to subdue *morbid* action, and cleanse the system of bile, had the mortification to witness a sudden prostration of strength, attended with coma, delirium, and death; or a tedious and protracted state of fever in which *good nursing* alone, ensured a favourable result.

My observations, this summer, fully convinced me that physicians should never be attached to particular remedies; but the important object should be to study the character and nature of diseases, and to adapt their remedies to the changes.

The paroxysms, in some cases, were attended with a violent affection of the head, flushed face, and delirium; here, active doses of calom. and tart. emet. given at once, and the application of a blister to the nape of the neck, procured relief in a few hours, and then, a judicious administration of bark and opium prevented a recurrence. These latter remedies were given successfully, even when the tongue was foul, and covered with a yellow coat, which would seem to indicate the necessity of further evacuation. The paroxysms were sometimes met with the lancet, followed by active doses of calom. and jalap, but the result invariably proved the error of such practice. We met with some cases of fever, attended with a *depressed* state of the system, small frequent pulse, flushed countenance, muttering, delirium, and great restlessness. In these cases, small bleedings were exceedingly beneficial, particularly when aided by calom. and pulvis antimonialis, given every two or three hours, in such doses as to act moderately on the bowels, and skin; but, if the bowels were *actually purged*, and the *skin remained dry*, our patients invariably grew worse. This was a singular fact, which attended the treatment of all our fevers this summer and fall; if a proper regard was not paid to the skin, our prescriptions not only proved ineffectual, but injurious.

In these protracted cases, the crisis was sometimes marked by a sudden discharge of blood from the fauces, but more frequently by screatus, and a copious flow of mucus from the fauces and mouth, which continued several days. Convalescence was slow, and the greatest caution, and the most vigilant attention, were required to prevent relapses.

October was very pleasant; the first frost was on the morning of the 10th; we had afterwards repeated frosts until the 21st, when the Indian summer commenced, and continued until the 30th. Mean temperature at two o'clock, P. M. for the month, 62° 3'.

This month was considered more sickly than any other, this season. The character of the diseases continued nearly the same. All the cases, in the commencement, put on an intermitting form, which, if not checked in a few days, assumed a remitting type, and then pursued a long, tedious, and dangerous course. Many persons, at first, believed, that the disease was nothing more than the old fashioned ague and fever, (so familiar to the old inhabitants of this place,) and undertook to cure themselves; however, a few days convinced them of their error, and placed them in a situation, not only dangerous, but, in some instances, beyond the reach of medical aid.

Here my former practice was again peculiarly successful. In the first paroxysm, the stomach and bowels were freely evacuated, and the next was anticipated, by two, three, or four grains of opium, aided by warm drinks, and hot applications to the feet, legs, and body; a free perspiration was thereby produced, and the chill was almost invariably checked. The next paroxysm was again anticipated by the same remedies, and it was seldom necessary to repeat them, or to give any other medicines afterwards. The patients suddenly convalesced, looking as healthy, in a few days, as if they had never been sick.

Very little reliance could be placed on bark *alone*, in curing this disease; sometimes, when given in very large doses, it would effect a cure; but then, it invariably produced great distress, attended with nausea, restlessness, and difficulty of breathing; these symptoms always excited alarm, and the aid of a physician was as anxiously called for, as under any other circumstances; in such cases, elixr. paregoric. afforded the quickest relief. In convalescence, after tedious cases of fever, bark was a most valuable auxiliary, in restoring strength, and preventing a relapse.

In some protracted cases, a typhus state of fever supervened, attended in some instances with a dark dry tongue, obstinate hiccup, and delirium; in others, with great nausea, and copious discharges of black matter from the stomach and bowels. Calom. and opium alternately used, produced the happiest effect. The first was given in such doses as to keep the bowels laxative; the second to quiet irritation and procure sleep. These remedies aided by sinapisms and blisters, with a cordial and nutritious diet, properly administered, did not fail in a single instance to effect a cure. It was in this state of fever, that the poor and indigent particularly suffered. Unassisted by proper nourishment and good nursing, the best aid of the physician proved unavailing.

Convalescence was sometimes attended by swelled feet and legs, with a red shining surface, great pain and tenderness to the touch, which in every respect bore the appearance of gout. Some cases were obstinate; but in no instance did suppuration take place.

The diseases did not abate, even after repeated frosts; but on the contrary became more obstinate and ungovernable. The remedies which had heretofore proved so successful, now failed altogether, and I was at a loss how to proceed, when I consulted my worthy friend, the venerable Dr. Charles Worthington, of Georgetown, in whose judgment and opinions I always place the highest confidence. He suggested the propriety of anticipating the paroxysms, by giving a bolus composed of precipitated sulphuret of antimony grs. ij., opium grs. ij., camphor grs. iij; which fully equalled my expectations, and again placed the disease fairly under my control.

About the 28th, we were visited by the influenza, when all former diseases disappeared, as suddenly as a flight of birds. Debilitated patients were liable to relapses, but these cases were easily managed. The influenza was mild, and seldom required medical aid.

Speculation was highly excited, to account for the cause of our diseases. The *philosophers of this place*, at first, boldly asserted that the low grounds contiguous to the Tiber, were the source of all our complaints. Afterwards, the sickness was attributed to the great quantity of earth, which had been heaped up, in making new streets; but these theories were not considered reasonable; because the diseases were not confined to the neighbourhood of these

places ; on the contrary, every part of the city participated equally, and, indeed, the high hills surrounding the city, were more unhealthy than the low grounds about the Tiber.

The surrounding country in Maryland and Virginia, was equally distressed with disease. Alexandria suffered more than any other place ; and Georgetown (which, heretofore, could never boast of as much exemption from disease as this place,) was peculiarly healthy.

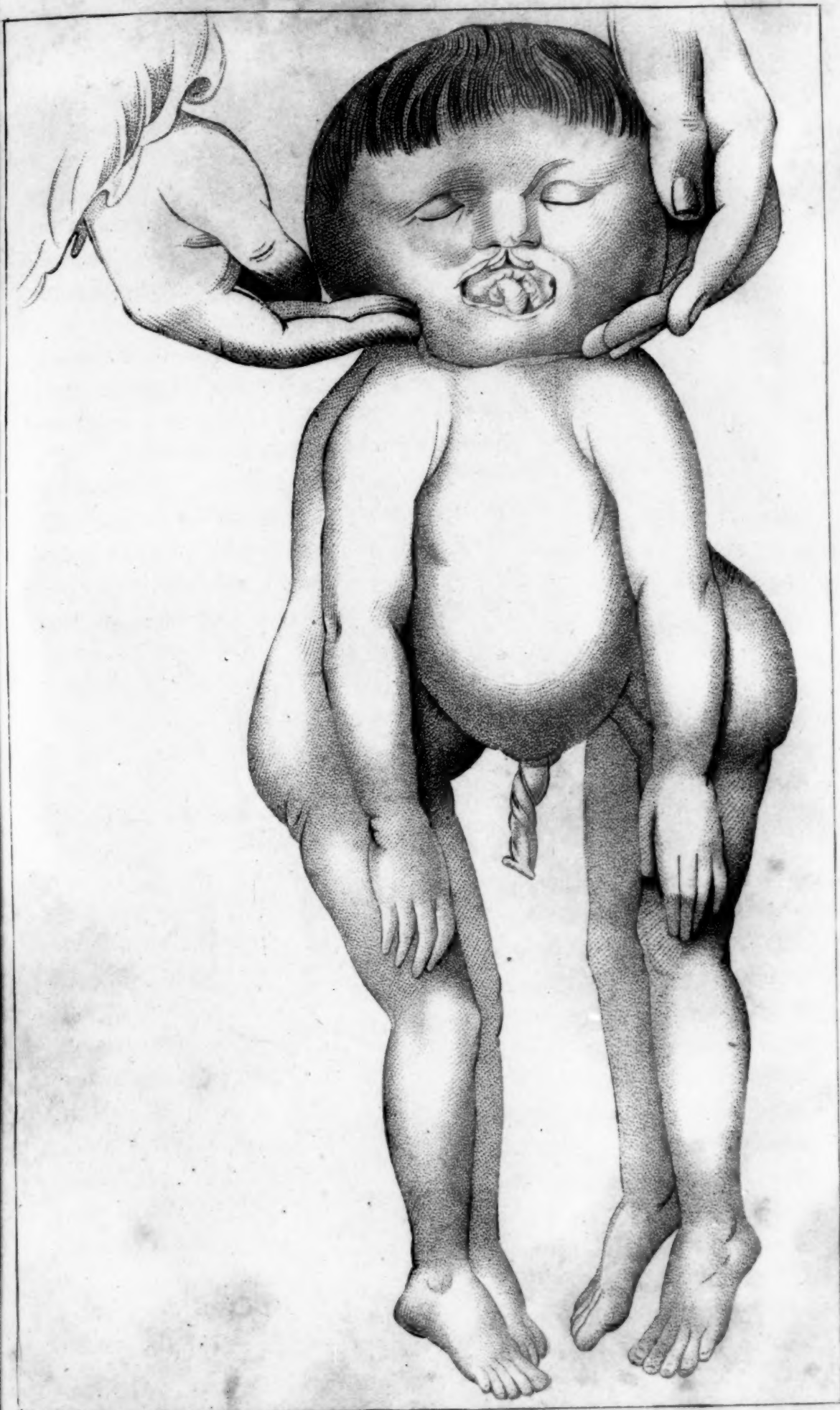
When all other causes failed, the *most knowing ones* declared, that the absence of thunder and lightning after the month of June, was the cause of general disease, and that a few limited spots escaped this calamity, by reasons which could not be divined.

All speculation on this subject, at last, seems to revert to the doctrines of the ancients, which declare, that all epidemics are owing to "a secret constitution of the atmosphere," (neither depending on heat, cold, dryness, or moisture,) which prevails periodically, and not only influences the character, but changes the type of diseases.

ART. VIII. *A case of Monstrosity.* Communicated by EDWARD DELAFIELD, M. D. of New-York.

IN the month of May, 1820, a woman was delivered in this city of a monstrous fœtus, which was immediately presented to me by Dr. Witmore, the physician in attendance. The woman judged herself to have been eight months and a half advanced in pregnancy, when the delivery took place ; and from her symptoms, and the appearance of the fœtus, it had been dead about a fortnight before parturition. She had laboured under dropsy of the ovum during this pregnancy, by which her abdomen had been so enormously distended, that she was incapable of moving herself without assistance, for some time previous to delivery. When the membranes broke, a very large quantity of fluid was discharged, to the amount, perhaps, of two or three gallons.

The monstrous fœtus, which I am about to describe, was formed of two female children, joined above the umbilicus ; the parts



below being perfectly distinct. At first view, it appeared as if there were a single head, attached to two bodies; but, on closer inspection, it was found to be made up of the greater portions of two heads, each looking forward, but in lines which, when produced, would form an acute angle. Posteriorly, two distinct occipita could be perceived, although covered by a common integument, and without any external line of separation between them; while anteriorly, the faces were so blended, as to appear like one. The two mouths were placed together, so as to form a continuous cleft; the two upper lips forming an obtuse angle, and separated by a fissure, extending downwards from the nose. From both mouths, probes could be readily passed into the *œsophagus*, but there the instruments could be felt in contact. The nose also was made up of the larger portions of two, although there was only one complete nostril on each side. On each side of the head, was an ear in the usual situation, and at the posterior part of it, at an equal distance from each of these ears, there was another imperfectly formed one; or rather, parts of two. Below the neck, a back vein of each *fœtus* was that of a well-formed perfect child, each with its extremities distinct and perfect. Altogether, this monster had the appearance of two children placed in contact anteriorly, but the heads turned so as to join at their sides; and all those parts blended together, which were in contact.

Having described the external appearance of this monster, I shall now proceed to state what was discovered on dissection. But to make the further description more distinct and intelligible, I shall speak of the view of the monster in the drawing, as the anterior one of the whole mass, and each *fœtus* as right and left, as if there were a single face.

On removing the integuments of the head, the anterior part appeared as of a single *fœtus*, the posterior of two. The frontal, temporal, and parietal bones were formed natural as of one *fœtus*. The anterior fontanelle was filled by two triangular bones, the line between which was continuous with the sagittal suture. There were two *ossa occipitum*, well formed and distinct, and between them a large pentagonal bone, about the ordinary size of the parietal. The cerebrum was very large, but appeared only as that of one *fœtus*; the falx major split into two portions anteriorly, and these portions were attached to the orbital processes of the *os frontis*. The ten-

torium covered two distinct cerebella, from each of which proceeded a medulla oblongata, into the spinal canal of each fœtus. The falx minor made a complete separation between the two cerebella; but, there was no process of dura mater, between the lobes of either cerebellum.

In the posterior part of the base of the cranium, corresponding to the imperfect ear, which has been noticed, was a bone, into which two auditory nerves passed, and containing a double organ of hearing. It appeared as if made up of the petrous portions of two temporal bones, blended together. It contained two labyrinths, placed in such a manner, as that the horizontal canals of the two were in contact, and the cupolæ nearly touched each other. The tympanum, had any existed, would have been between the bones; but, this being deficient, the ossicula were also wanting, as well as the foramen ovale, which is usually closed by the base of the stapes. The foramen rotundum did not exist.

On cutting into the chest, two sterna were found, the one anterior, the other posterior, each connecting the ribs of one fœtus to those of the other; the remaining bones of the chest, as natural as of two fœtuses. There were two distinct thymus glands, of natural appearance. A process of pleura, passed from one spine to the other, as if the two mediastina had united. There were two distinct sets of lungs, each with a distinct trachea, separated by a single œsophagus; but, the surfaces of the tracheæ, which are usually anterior, lying upon the spine on each side.

In the anterior of the two large cavities of the chest, formed by the mediastinum, which was described, was a heart of the ordinary size. From it proceeded an aorta, in the usual manner, from the left ventricle, and, after giving off the right subclavian of the right fœtus, and both the carotid arteries, it made its curve, and formed the descending aorta of the right child. The artery which went from the right ventricle of this heart, and which is usually the pulmonary, formed an arch, and after receiving, in that situation, a considerable branch from the right carotid, and sending off both subclavians of the left child, went to form its descending aorta.

In the other cavity of the chest, was another heart, about one-fourth the size of the first, and made up of only one auricle, and one ventricle. It gave off two vessels: one of these sent a branch to the aorta of the right fœtus; and from the point of union, passed

off the left subclavian artery of that fœtus: the other vessel, going from this heart, divided into two branches, which went to form a vertebral artery, going to each foramen magnum.

The larger heart then furnished both aortas; the two carotids distributed as to a single head; both the subclavian arteries of the left child, and the right subclavian of the right child. The smaller heart furnished a single vertebral artery, to enter each foramen magnum, the left subclavian of the right fœtus, and a branch to the aorta.

The vena cava, inferior of the left fœtus, came up on the left side of the aorta, as high as the usual situation of the left subclavian vein, and uniting with that vessel, crossed anteriorly to the curve of the aorta, then received the right subclavian of the other child, and turned down to form the superior cava, and enter the right auricle of the larger heart. The vena cava of the right fœtus had the ordinary distribution, and went to form the inferior cava of the larger heart.

The smaller heart received blood only from the veins of the smaller liver.

There was a single umbilicus and cord. The cord was made up of three arteries, and one vein; two of the arteries going from the right child, and one from the left. The umbilical vein passed into the liver of the right child; that of the left received no blood from the cord.

From the two conjoined mouths, proceeded a common pharynx, and œsophagus, which passed down between the tracheæ to a common stomach, of peculiar form. The stomach appeared as if made up of two, united by their smaller curvatures, but with a common cavity: thence proceeded, from the situation where the two pyloric orifices seemed to have joined, a single duodenum. This terminated in an intestine, which was very much convoluted, and after running about half the length of the small intestines, divided into two portions. After this division, the two intestines terminated, each in a distinct colon, which was distributed in the usual manner.

There were two distinct spleens and pancreæ, and each fœtus had also its two kidneys.

There were also two livers, and each of these had its gall-bladder. The liver belonging to the right fœtus, was a little larger

than usual ; its gall-bladder gave off its duct to the duodenum, in the ordinary manner, and contained a little bile. The other liver was about one-fourth the size of the first ; its gall-bladder contained no bile, nor was there any duct going from it.

The organs of generation were perfect, and distinct in each foetus.

ART. IX. *Case of Stricture of the Rectum, successfully treated by an operation.* By Dr. HORATIO GATES JAMESON, of Baltimore.

Miss C. M. about five years since, had a tumour which gradually grew from the rectum till it obtained considerable size, and projected about two inches. She applied to a medical gentleman of this city, who removed it by ligature. The parts soon healed up, but immediately afterwards she laboured under great difficulty in passing the alvine evacuations. The obstruction increased rapidly, and was soon attended with severe pain, and inability to evacuate the bowels without taking physic. Her sufferings, she represents, as having been very great. She consulted a surgeon, of this city, who attempted to relieve her by the use of bougies of different sizes. The use of these soon increased her distress, and instead of using them of an increased size, as he wished her to do, she was compelled to diminish the size of the bougies, till she found it impracticable to use them of any size.

During an interval of nearly five years, she has had the advice of several highly respectable physicians of this city in succession, who all pronounced it a callous tumour, as well as the surgeon above-mentioned. She has long been in a very deplorable condition ; and cannot, for some years, have a stool without taking medicine, and even with the aid of purgatives, the act of passing the fæces is attended with great pain. Extreme pain, constipation, and symptomatic fever, often have seriously threatened her life.

On passing the finger into the rectum, I found the sphincter muscle free from disease, but disposed to contract closely upon the finger ; not, however, with any great degree of force. About an inch up the rectum I found an obstruction, having, at first, precisely the feel of a callous tumour, of considerable size. After a more thorough examination, and causing the patient to change the

situation of the parts, by pressing down forcibly, while my finger was still introduced, I discovered, that what had been considered a tumour, was really but a membranous partition of the rectum. Continuing the examination, I discovered that this partition had been formed by the rectum falling down in folds, as we sometimes see in subjects who have died of chronic diarrhœa, and that in this state they must have become inflamed and grown together, leaving a small opening, not in the centre of the partition or septum, but near its pubic side. This opening greatly resembled the os tinæ. It was much thickened and callous, so that it might readily deceive one into the belief of its being a solid tumour. This difficulty was increased by the circumstance, that when the patient strained down, or any fæces lodged behind the septum, the opening was turned up horizontally towards the pubis, and the septum became very tense.

This situation of the parts rendered it almost impossible for the fæces to pass through the opening. Great quantities of mucopurulent discharges have long existed, and have tended to impair her strength. The parts affected are exquisitely tender.

Having satisfied myself that this was the nature of the case, and having represented to the patient, that an operation might be practised with good hopes of relieving her; that we had something to fear from hemorrhage, and from peritoneal inflammation; but, upon the whole, I thought the danger would not be great, if she would determine on conforming strictly to my directions after the operation. She determined to submit to any thing I thought proper to try for her recovery from a situation so truly deplorable.

In the presence of my friends, Drs. Murphy and Martin, I operated in the following manner, 22d September, 1821. I passed my left fore-finger into the rectum, and placed the end against the opening through the septum, but could not pass it through; keeping the finger here, as a guide, firmly pressed against the opening, I conveyed with the right hand, a button pointed bistouri along the finger. I carefully directed the point of the knife with the end of the left fore-finger into the opening. Being satisfied that the end of the knife had passed some distance into the opening or ring of the septum, I cut freely down towards the sacrum by drawing the knife towards me; endeavouring, at the same time, to direct its movements with the left fore-finger. I thus readily divided the septum down to its termination, and found the rectum

perfectly relieved and quite capacious. But to my great surprise, I discovered, by passing the finger upwards, that another partition existed, precisely similar to the first, and about an inch higher up. This I treated in the same manner, and with the same result; removing, by these simple incisions, an obstruction which had tormented the patient for years, and often endangered her life.

Notwithstanding the incisions were made with great freedom, there was very little hemorrhage; my hands were scarcely soiled. A long piece of compressed sponge was now introduced, and the patient, having taken fifty drops of laudanum, was put to bed, and a T bandage applied to retain the sponge in its place. The patient was advised to take fifty drops of laudanum in the evening, with a view of restraining the bowels, as well as to obviate irritation and pain. I had taken care to have the intestines well emptied the night before the operation.

September 23d.—Informed that some hemorrhage occurred yesterday soon after I left the patient; she was greatly alarmed. Dr. Murphy saw her and quieted her fears, and the hemorrhage soon ceased; patient in all might, according to the doctor's computation, have lost fourteen ounces of blood. She had considerable pain at night, and in a fit of petulant rashness, took upwards of an ounce of laudanum. This brought on high fever, sick stomach, great thirst. The patient drank largely of cold water in the morning, and brought on violent vomiting. She has not had any inclination in the parts to pass off the sponge. I bled her freely, and directed effervescing draughts.

Sept. 24th.—Has been reasonably comfortable since yesterday morning. I removed the sponge, without difficulty, this morning; the parts are extremely sore; the rectum quite spacious. Has little or no fever; advised her to refrain from every kind of solid food, and to take a portion of calcined magnesia, to which she has been accustomed.

Sept. 25th.—The patient was attacked with vomiting and fever after my visit; was bled and took effervescing draughts, which relieved her perfectly, and I find her doing well this morning. Advised her to take a dose of oil, the magnesia not having acted. Afternoon, fever has returned with severe vomiting. I bled her about $\frac{3}{4}$ xij. In the act of vomiting, this afternoon, she had an involuntary, painful, and copious stool, the first free evacuation she had had for five years.

It seems unnecessary to pursue this case further in detail. There was no difficulty from hemorrhage; nor was there, at any time, any soreness of the abdomen to excite uneasiness, in regard to peritoneal inflammation. She was affected, for several days, with fever and sick stomach. Most of these unpleasant symptoms, doubtless, arose from the improper use of laudanum, and from other little improprieties in diet and drinks, which the patient practised.

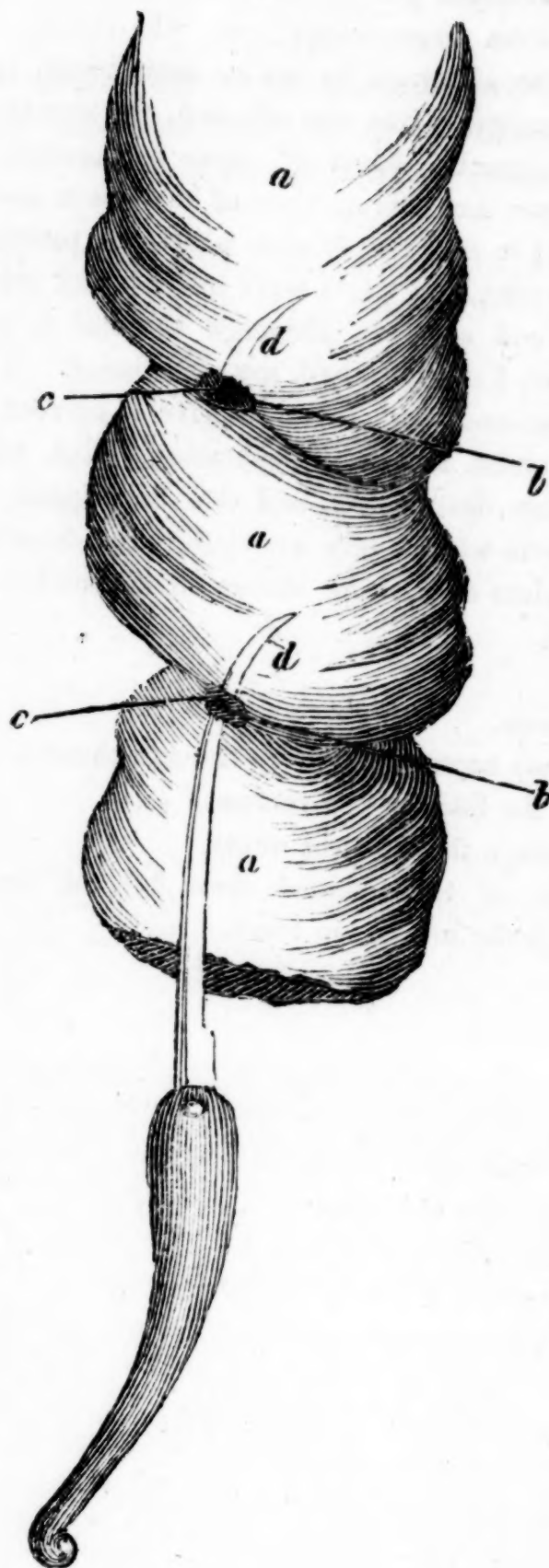
In about four weeks, the parts were healed, and the patient restored to health and comfort, although she had a pretty severe bilious attack after I discontinued my attendance. The drawing which I have procured, will serve to give a correct idea of the nature of the stricture, and of the operation. But, as the painter had to sketch from description, and that description founded on ideal views of parts which were not visible, the drawing is necessarily stiff, and aims at showing things in a situation, which can only be imagined.

a a a The rectum.

b b The callous septa, formed by the attachment and thickening of the folds of the rectum.

c c The openings through the septa.

d d The point of the bistouri seen beyond the septa, and through the orifices in them.



ART. X. *Case of Strangulation of the Intestines within the Abdomen.*

By SAMUEL JACKSON, M. D. of Northumberland, in a letter to JOSEPH HARTSHORN, M. D. of this city.

ON the 4th of April, my friend and neighbour, Mr. E. Lyon, the proprietor of Shamokin Island, opposite to this town, complained to me of a painful and costive state of his bowels, which had troubled him for some weeks, and was now constantly increasing. In other respects, he was quite well, and was going about as usual, attending to the business of his farm.

There was no symptom of fever; the tongue was clean, the pulse full, soft and slow, and neither coughing, sneezing, sighing, nor the severest pressure on the abdomen, gave him any pain. It was his own opinion, that all his uneasiness arose from costiveness and wind, and that some aperient medicines would afford him relief.

As there was no symptom whatever of inflammation, I very readily acceded to his views, and therefore prescribed some purgatives and the tincture of guaiacum, as an aperient carminative. The latter article was suggested to my mind by the circumstance of Mr. Lyon being frequently troubled with chronic rheumatism.

My patient was in his seventy-second year, of a robust and healthy constitution, and an example of the strictest regularity and temperance.

My prescriptions were faithfully tried for several days, but without any advantage: the medicine operated largely, but with much pain. He now referred the greater part of his uneasiness to the umbilical region, but the severest pressure on that part gave him no pain. He said, that during the day, when attending to his business, or receiving the visits of his friends, he felt pretty comfortable, but in the night he suffered so much, that he was often obliged to rise and seek relief, by fixing himself in a fixed position in his chair. There was still no symptom of fever, and the pulse was steadily at sixty-four, full and soft.

The most plausible opinion I could form was, that some part of the alimentary canal was constipated, and that it was to be broken up with purgatives. It was also directed, that one or more injections should be administered at bed-time, in order to procure a

more comfortable night, and asafœtida was substituted for the guaiacum.

This method was tried like the first without any benefit. The purgatives operated, but with pain and difficulty; and the injections brought on the most distressing sickness and vomiting, without procuring any considerable evacuation, or affording any relief. With some of the cathartics, he passed some indurated fæces, in portions of two inches long, and not thicker than a turkey quill. This circumstance at once led me to suspect a scirrhus-contracted rectum, but several very careful examinations detected nothing of this affection. I now administered an injection myself, in order to witness its effects. It was received with difficulty, and though not retained more than two minutes, it brought on severe vomiting and universal distress. After an hour's rest, I gave him by injection thirty grains of tart. emet. dissolved in a gill of water. This remained with him several hours, without affecting him in any way, thus proving, that it was the disproportionate capacity of the bowels to the quantity of the common injection, that distressed him.

During all this time, he had been walking about, attending a little to his business, and conversing cheerfully with his family and friends; but no sooner was he left without something to interest his mind, than he was seen leaning on his lap, and pressing a pillow to his belly. He would say to me, "when a friend steps in, or my family have something cheerful to say or read to me, I am pretty comfortable, but at night I can obtain no rest; and whenever I hear any unpleasant news, or any painful subject is introduced, I instantly feel doubly distressed in my belly." He now began to think that his whole disease was mental, and this opinion he retained to the last. He had met with many disappointments, and suffered some severe losses, in a manner the most ungrateful to a man of his generous spirit, which now, in the decline of life, bore heavily upon him.

There was still no symptom of fever; the pulse was yet sixty-four, full and soft, the tongue clean, and pressure on the abdomen gave no pain. Lest, however, there might be a latent inflammation, some blood was drawn from the arm, which proved highly inflammatory. It was therefore plain, that a chronic inflammation existed somewhere in the abdomen, and of course, the reducing system was begun and carried on from day to day, as rapidly as

possible, but without obtaining any relief. He was, therefore, severely salivated, and bled frequently during the operation of the mercury, the bowels being kept free with castor oil.

During the height of the ptyalism, he did not complain so much of the pain, which gave me great hopes of his final recovery: but this apparent relief was merely illusory, the patient's thoughts being directed to the disease of his mouth; for no sooner did this begin to ameliorate, than the pain of the abdomen became more severe than before. At this time he began to feel pain from pressure near the navel; and now, at last, an internal tumour was to be felt, which was excessively tender.

He was now reduced very low; the depleting system could be carried no farther, and, consequently, the discussion of the disease was impossible. Whatever the tumour might be, it appeared to be the business of the physician to strengthen the system. He was, therefore, allowed a more generous diet, the bowels were attended to, and laudanum given freely, from which he derived much comfort. Many were now my conjectures as to the origin of the disease, but they all proved fallacious.

He said to me, "I suppose you have now no hope?" I answered, that there was no reason to despair; that the swelling might discharge its contents into the intestines, or, if it should prove to be of the indurated kind, that he might derive ease and comfort from the habitual use of laudanum, and thus protract a tolerable existence. He replied, "I am dying of a broken heart," and this had been his steady opinion during the whole course of his afflicting disease.

On the 24th of May, he was taken with an alarming deliquium, and, after a few minutes, puked nearly a pint of venous blood. When I arrived he was deathly pale, and without a pulse at the wrist. Laudanum, and other stimulants, were faithfully administered, with some temporary effects, but a vomiting of a substance similar to coffee grounds came on, and prevented the proper exhibition of nourishment and medicine. Notwithstanding the very free use of laudanum, it was plain that his sufferings were very great. He retained his senses entire, till death closed the scene on the morning of the 27th.

The following night I opened the abdomen, in the presence of Dr. Slough of Sunbury, and a number of our neighbours, when, behold the *ποθεν το κακον*, the incurable origin of my patient's suffer-

more comfortable night, and asafœtida was substituted for the guaiacum.

This method was tried like the first without any benefit. The purgatives operated, but with pain and difficulty; and the injections brought on the most distressing sickness and vomiting, without procuring any considerable evacuation, or affording any relief. With some of the cathartics, he passed some indurated fæces, in portions of two inches long, and not thicker than a turkey quill. This circumstance at once led me to suspect a scirrhus-contracted rectum, but several very careful examinations detected nothing of this affection. I now administered an injection myself, in order to witness its effects. It was received with difficulty, and though not retained more than two minutes, it brought on severe vomiting and universal distress. After an hour's rest, I gave him by injection thirty grains of tart. emet. dissolved in a gill of water. This remained with him several hours, without affecting him in any way, thus proving, that it was the disproportionate capacity of the bowels to the quantity of the common injection, that distressed him.

During all this time, he had been walking about, attending a little to his business, and conversing cheerfully with his family and friends; but no sooner was he left without something to interest his mind, than he was seen leaning on his lap, and pressing a pillow to his belly. He would say to me, "when a friend steps in, or my family have something cheerful to say or read to me, I am pretty comfortable, but at night I can obtain no rest; and whenever I hear any unpleasant news, or any painful subject is introduced, I instantly feel doubly distressed in my belly." He now began to think that his whole disease was mental, and this opinion he retained to the last. He had met with many disappointments, and suffered some severe losses, in a manner the most ungrateful to a man of his generous spirit, which now, in the decline of life, bore heavily upon him.

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ings. The omentum was denuded of its fat, and adhering in several places to the peritoneum. On the right of the navel, and about two inches below it, there was a small rent in the omentum, through which protruded about eight inches of the small intestines. The hernia passed upwards into a cul de sac formed by the omentum and peritoneum, and being distended with air and greatly inflamed, it formed an elastic tender tumour above the navel. Nothing unnatural was found in any other part of the abdomen: the puking of blood was, therefore, supposed to have arisen from a passive hemorrhage from the stomach.

ART. XI. *A case in which a singular Animal was discharged from the human intestines.* Communicated in a letter to one of the editors, by Dr. TIMOTHY LITTLE, of New-Gloucester, Maine.

New-Gloucester, December 14th, 1821.

SIR,

Captain True's son, respecting whom you inquire, was about four years old, and was generally as hearty as most children are at that age. On Tuesday morning, 5th June last, he complained of being unwell, and ate no breakfast. He, however, accompanied his father to work on the highway, but was soon forced to return home. He was thought to be troubled with worms, and was treated accordingly, by the physician who was called in by the family. Notwithstanding the medicines which were administered, no passage from the bowels could be obtained. On Saturday night, 9th June, I was called, in consultation with Dr. Bridgham. I learned, in addition to the circumstances which I have mentioned above, that the patient had vomited frequently, from the first day of the complaint; that he had considerable pain in the bowels, (not so severe as it generally is in obstruction of the intestines) and occasional moments of ease. A peculiar gurgling noise had been remarked in his bowels from the commencement, but was not observed after I saw him. His abdomen was swollen, and tender to the touch. The febrile symptoms were considerable, and his thirst very great. He had taken six or eight grains of calomel, a

few hours before, without any effect. We, therefore, thought it advisable, to repeat the dose, and, at a proper time, to follow it up with the oleum ricini. We also directed the warm bath, but it did not afford the relief it usually does in spasms of the bowels. The calomel having been taken a sufficient time to produce its effects, without any operation whatever, we gave him an injection of the sulphate of soda, to assist its action. The enema was soon ejected; and was repeated without advantage. In the course of the night, a few grains of calomel, mixed with the ol. ricini, were given at several times; and two or three injections of a weak decoction of tobacco, were administered, but all to no purpose. The bowels remained obstinately bound. He vomited several times in the course of the night, and in the morning he twice ejected from the stomach, a large quantity of feculent matter. We now conceived his situation desperate.

Dr. Bridgham continued to attend him, but made use of no extraordinary means. On the following Friday, June 15th, without any alteration having occurred in the symptoms of the case, the patient had an evacuation *per anum*. From this time, his stools became frequent, copious, of a dark colour, and exceedingly fetid. I saw him again on Sunday, the 17th. He now had irregular feverish flushes, restlessness, unnatural appetite, &c. He would frequently call for something to eat, and would devour a small quantity with great voracity. On Monday night, he discharged a fragment of an uncommon animal. Dr. Bridgham called it a water adder, and thought that the bones were left in the child. I, however, did not believe it to be any species of the snake. It was not tattered on the inside as if it had come from a skeleton, but was entire and smooth. The length of the piece which was discharged, was 15 inches, and its thickness, about that of a man's thumb. It was open on the belly, from one extremity, to about three-fourths of the way to the end, which was supposed to have supported the head; and a finger might have been thrust into the part which was whole. Its colour, on the outside, was of a dark brown, or rather of a greenish hue. I examined it, through a microscope, but could discover nothing very remarkable, except that its surface exhibited a velvet-like gloss. It was in so imperfect and mutilated a state, that it was difficult to form any idea of its probable appearance when alive. It was unlike a snake or an eel, in that its bowels did

not terminate at some distance from its extremity, leaving a thick mass of flesh for the tail. It exhibited more of the vermiform appearance; and, I believe it to have been a worm, of an extraordinary kind. I could not precisely ascertain how much of it was retained; but, as both ends terminated abruptly, and were jagged, I think it must have been, at least, 20 inches; or, perhaps, even two feet, in length.

The child lived three days after discharging the animal, and died on Tuesday, the 19th of June, a fortnight from the time he was taken ill. A request was made for permission to examine the body, but was refused; and thus we were deprived of the means of ascertaining, more satisfactorily, the nature of this anomalous and interesting case.

ART. XII.—*A Case of Strangulated Hernia, attended with unusual circumstances.* Communicated by Dr. JOHN BASKIN, of Selinsgrove, Northumberland.

I was called on the second June, 1821, to visit Peter Hain, whom I found labouring under a strangulated inguinal hernia. He informed me that he had been subject to hernia for about twenty years. After the failure of the most efficient means to effect a reduction, I proceeded to operate, assisted by Dr. Jones of this town.

After dividing the integuments, muscles, &c. down to the abdominal ring, I found it, from the long standing of the hernial protrusion, sufficiently dilated to permit the passage of my finger through it with ease, which enabled me to ascertain that the stricture was not occasioned by either the abdominal ring, or the semicircular edge of the transversalis muscle and its tendon at the inner aperture. I then made an incision through the parietes of the sac, upwards to the abdominal ring, through which I introduced my finger upwards, the full length of it, with a confident expectation of bringing it in contact with the stricture; in which I was disappointed.

Finding the stricture beyond the reach of my finger, I withdrew it, and extended the incision upwards through the abdominal ring, to enable me to ascertain the seat of the stricture. Notwith-

standing which, I was still unable to reach it. For, to my surprise, I found it still completely beyond the reach of my finger or that of a common bistoury.

Owing to the inflation of the strangulated portion of intestine, the cavity of the sac, above the abdominal ring, was so completely filled by it, that I found considerable difficulty in passing my finger along it. In consequence of which it embraced my finger so closely, that in withdrawing it, after an unsuccessful attempt to reach the stricture, it brought the intestine (which before did not extend so far down as the abdominal ring) out with it, at the opening in the sac, by which the sac was inverted, and the part forming the stricture brought below the abdominal ring, which enabled me, without difficulty, to divide the stricture,* after which, the strangulated portion of intestine was returned into the abdomen. The patient informed me, that the hernial protrusion had extended to the bottom of the scrotum, though, when I first examined it, it did not extend much below the abdominal ring.

He also informed me, that he had been in the habit of returning the contents of the hernial tumour into the abdomen, whenever it became painful; and that he had, previous to my seeing him, made use of considerable force for that purpose. By which, he had, in his language, "nearly pushed it into his belly again." From which it is obvious, that the stricture must have taken place in that part of the sac below the abdominal ring; and that he had, by his efforts to reduce it, forced the hernial sac partly into the abdomen, which placed the stricture beyond my reach; in which situation I found it. The unforeseen state of the parts, and seat of the stricture, in this case, might have been the source of much embarrassment to us in the operation, had not accident fortunately obviated it. Therefore, the only apology which I shall offer for troubling you with the particulars of it is, that it may, through the medium of the Recorder, probably, prove useful to inexperienced operators, which country practitioners, generally, must of necessity be, from the few opportunities which offer of performing capital operations.

* The stricture embraced the intestine so closely, that it was with some difficulty that I passed a director through it.

ART. XIII.—*A Case of obstinate Constipation.* Communicated by
Dr. WILLIAM RANKIN, of Franklin County, Pennsylvania.

On the 24th of April, 1820, I was requested to visit Miss J. J., twenty-three years of age, who had been seized, a few days previous, with violent tormina and tenesmus, accompanied with mucous and bloody stools. Her pulse was full, active, and somewhat tense. Ten ounces of blood were, therefore, immediately extracted from the arm, which, after standing some time, became cupped and sizzly.

The patient was directed to take an ounce of the ol. ricini, which, in case it should not operate on the bowels in the course of two or three hours, was to be repeated. Ten cathartic pills were also left to be taken, agreeably to proper directions, should the oil procure no passage through the bowels.

25th. Upon visiting her to day, I found that all the medicines had been carefully administered, without producing the desired effect.

With a view of relaxing the spasmodic constriction of the bowels, sixty grains of calomel and six of opium were now ordered to be given, in divided doses of twenty grains of the former, and two of the latter, every three hours. Domestic injections were repeated, from time to time, in order to promote the purgative operation of the calomel and opium. As auxiliaries, the warm bath and hot fomentations to the abdomen, were resorted to. The bath was continued as long as it could be borne, and the fomentations kept constantly applied.

26th. The pulse is less active, than at my first visit, but in other respects, no change has taken place for the better. The patient complains of considerable pain in the hypogastric region.

She was again placed in the warm bath, and continued in it until syncope was brought on. A powder, consisting of twenty grains of calomel and as much jalap was exhibited, and an injection of the infusion of senna and Glauber's salts thrown into the rectum, which, as well as the former enema were retained but a few minutes.

To relieve the pain in the hypogastric region, the abdomen was covered with a blister.

27th. No change has taken place in the state of the bowels. The pain in the abdomen has been considerably relieved by the epispastic plaster; but most violent pain is felt in the head. In order to relieve the latter affection, cloths wrung out of cold vinegar and water were ordered to be kept constantly applied to the forepart of the head. Three ounces of C. T. sennæ were left with the patient, of which she was directed to take two table spoonfuls every three hours.

28th. The pain in the head is somewhat abated; but no alvine discharges have been procured. Twenty grains of calomel and six of opium were administered to the patient, and directions left to repeat twenty of the former and three of the latter every third hour, until sixty grains of the calomel and twelve of the opium should be taken. An enema made up of a pound of the infusion of senna, and two drams of the powder of jalap, was also ordered, with the expectation that it would expedite the operation of the purgative medicines, which had been taken by the mouth.

29th. No stools; her pulse has again become frequent and full. She appears exceedingly drowsy and languid, which are, doubtless, the effects of the opium.

Ten ounces of blood were drawn from the arm, which was cupped and covered with a buffy coat. Twenty grains of calomel and an equal quantity of jalap were ordered to be taken every third hour. A terebinthinate injection was likewise administered, and should it be deemed necessary, an enema of the common kind was also to be given.

May 1st.—The two last injections were retained, but procured no evacuation from the bowels. The pulse continues excited, and the stomach much disordered.

To-day more blood was taken from the arm, which had a better appearance than the last. An emetic of tartarized antimony was now exhibited, with a view of not only relieving the distressing sickness of the stomach, but in order, if possible, to produce such a relaxation of the system as would favour the removal of the intestinal obstruction.

The emetic operated actively, but no perceptible alteration has taken place in the condition of the bowels. The blister, over the abdomen was re-applied, and an injection of tart. antim. ʒss. aq. tepid. was administered, with directions to repeat it in three hours.

2d. The injections were not retained, and of course produced no beneficial effect. The mercurial action has now manifested itself in the mouth, without, however, as yet, effecting any change on the state of the bowels.

The situation of the patient being a critical one, and all my endeavours, as yet, having failed to procure any favourable result, I advised a consultation. To this her friends readily agreed, and their choice fell upon my friend, Dr. Dean, of Chambersburg.

After the arrival of the Dr., and the particulars of the case were made known to him, we agreed to try the effects of the cold bath. The patient, accordingly, was placed erect in a large tub, and a bucket-full of cold spring-water, forcibly dashed upon the abdomen. The shock, which was very sensibly felt, was succeeded by a powerful re-action, but there followed no alvine discharges.

Having waited some hours, we had a quantity of cold water thrown into the bowels, which, in conjunction with the cold bath, was to be repeated during the course of the evening. In case, however, of the failure of these means, four hundred drops of tinct. opii were ordered to be administered per anum.

3d. The cold injections were not retained many seconds. The laudanum remained in the bowels, but was productive of no advantage to the patient.

Upon the arrival of Dr. Dean to-day, a suppository of tobacco was introduced into the rectum, which, in less than twenty-five minutes, brought on the most deadly sickness, accompanied, as usual, with extreme relaxation of the system. These effects continued, with little abatement, after the tobacco was withdrawn, for the space of eight or ten hours, during which time the pulse was almost imperceptible. It was now determined, should the obstruction not be removed, by the next morning, to exhibit the *argenti vivum*. But, upon visiting the patient next day, both herself and friends were so obstinately opposed to the trial of this remedy, that they preferred running all hazards, rather than to have it administered. Such is the irritability of the stomach to-day, that the patient is unable to retain either medicines or drinks. Her situation, in every other respect, continues the same as at the last visit.

Being now deprived of the assistance of Dr. Dean, I could think of no remedy which would be more likely to relieve the patient than injections of very large quantities of tart. emet., if by

any means the bowels could be brought to retain them. For this purpose, a drachm of emet. tart. dissolved in three ounces of tepid water, to which had been added two drachms of laudanum, was thrown into the rectum, and directed to be repeated, should this not procure copious discharges from the bowels.

5th. The first injection, which was administered on yesterday, brought a few lumps of hardened fæces, and the last, several small stools, without, however, producing any other obvious effect.

The patient is now profusely salivated from the mercury which she has taken.

9th. She is very much distressed with the pain and swelling of her mouth and jaws, and has not had any evacuation from the bowels since the fifth, with the exception of some very small stools, which were brought away by the daily use of domestic injections. To-day a dose of salts was administered, and a wash directed for the mouth.

11th. The saline purge which was taken on the ninth operated actively, and the patient is now rapidly recovering.

To what particular medicine we should, in the foregoing case, ascribe the removal of the disease, I am unable, with certainty, to determine; but feel disposed to attribute most efficacy to the mercury. Until the system became completely mercurialized, the most powerful cathartics, and other auxiliary means, were altogether unavailing. I am, therefore, led to believe, that the obstruction was removed by the mercurial action, and all that remained to be done, was to excite, in a moderate degree, the peristaltic motion of the bowels, which was accomplished by means of the salts and injections. The latter appeared to make but a slight impression upon the intestines. Even the enema in which we dissolved the tart. emet. procured no other evacuations than such as were ascribable to its liquid contents; for none of those violent effects which we are taught to expect from the use of this remedy, were produced. Intense nausea, accompanied with severe retching and vomiting, copious discharges of stool, and extreme relaxation of the muscular system, professor Chapman informs us, are the usual consequences of injecting tart. emet. into the bowels; but in the present case, the effects were no greater than we should anticipate, from throwing into the rectum, the same quantity of warm water. The tobacco, perhaps, may have co-operated with the mercury, in removing the obstruction, but the latter, I am convinced, was the

most efficient agent, without which, the other remedies would have been altogether ineffectual.

In the treatment of this case, we do not, in any one particular, claim originality. Our design is to show the obstinacy of the obstruction, and the extent to which the most powerful remedies may be exhibited with impunity. In the space of six hours, our patient took twelve grains of opium and sixty of calomel, the only effects of which were a slight degree of drowsiness and langour. On the next day sixty grains of calomel, and as much jalap, were administered, without, however, operating in the slightest degree upon the bowels, or in any other way incommoding the patient, except so far as it may have increased the salivant affection of the mouth. The suppository of tobacco brought on a good deal of sickness and relaxation, which were by no means alarming to a person acquainted with its *modus operandi*. The cold bath, injections of cold water, and of tart. emet. produced no bad effects upon our patient.

REVIEWS.

Quidquid venerit obvium, loquamur
Morosa sine cogitatione.

MARTIAL.

ART. XIV. *A Dictionary of Chemistry on the basis of Mr. Nicholson's; in which the Principles of the Science are investigated anew, and its Applications to the Phenomena of Nature, Medicine, Mineralogy, Agriculture and Manufactures, detailed.* By ANDREW URE, M. D. Professor of the Andersonian Institution, Member of the Geological Society &c. with an *Introductory Dissertation; containing Instructions for converting the Alphabetical Arrangement into a Systematic order of Study.* First American edition, with some additions, notes and corrections. By ROBERT HARE, M. D. Professor of Chemistry in the University of Pennsylvania; assisted by FRANKLIN BACHE, M. D. Member of the Am. Phil. Soc. and Academy of Nat. Sciences of Philadelphia. Vol. ii. 8vo. Robert Desilver, Philadelphia, 1821.

THE great utility of chemical science, which it has been the glory of modern times to illustrate, has attracted to the laboratory, the most distinguished men in every civilized country; to whose ingenuity and application, we are indebted for continual additions to our knowledge of the wonderful endowments of matter. The frequent discovery of new properties and combinations, justifies us in the opinion, that although much has been done, chemistry is very far from being perfect, either as an art or a science. Whether the limited mind of man is adequate to the development of all the secrets contained in the hidden recesses of our globe, may, indeed, be a question: every chemist is ready to acknowledge, that many things desirable to be known, have hitherto eluded his research; but the delight we experience, and the benefit we derive from each progressive step in improvement, is sufficient to stimulate us to farther

exertion. Nor should we be discouraged from the investigation of any subject which may be susceptible of improvement, by its apparent insignificance. By an experiment of Scheele, although predicated upon false principles, a new article was added to the list of elements, the defects of a great theory demonstrated, and important improvements introduced into a valuable art; and it has frequently happened, that an accident apparently of little moment, has become the foundation of a train of reasoning and experiment, resulting in brilliant discoveries and invaluable improvements in the useful arts. The practical chemist, indeed, is often induced to exclaim with the poet,

“What dire effects from trivial causes spring!”

Like other sciences, chemistry has been the subject of many theories, which, founded on the results of partial experiments, have been improved, corrected, and remodelled by successive discoveries, until, as the sun of science advanced nearer his zenith, they have disappeared like the “morning cloud and early dew.” The Lavoisierian system may be said to be the first which comprehended all the important facts which, previous to its promulgation, formed the chaotic mass of chemical science. The captivating simplicity of this system destroyed, in a great measure, the occult character which, from various causes, was attached to chemistry, and rendered its study a popular pursuit, with a class of men, who would have shrunk appalled from the task of committing to memory, the formidable list of unconnected facts, which were now so systematized as to present themselves almost intuitively to the grasp of common intellect. The progress of experimental investigation, however, brought facts to light, which were incompatible with some fundamental points in the theory in question, and oxygen was obliged to share its dominion over the “spirit of fire” with numerous rivals.

It is not to be wondered at, that the remarkable phenomena of combustion should be referred to as a criterion for chemical classification; especially when we consider that important and extensive classes of substances are its results, and the disengagement or absorption of caloric, so universally attendant upon combination.

According to Lavoisier, the result of combustion must be either an oxide or an acid, of which oxygen was always a component. Compounds, however, were formed, which, although independent of oxygen, possessed acid properties, and various substances were

observed to combine with the appearance of combustion without the presence of this principle.

Some authors continue to think, that the production of acid or alkaline matter, or water, is an indispensable characteristic of combustion, while others apply the term to any composition which is attended by the extrication of light and caloric; and a modern author of no small celebrity, has even ventured to introduce the term *semi-combustion*. From this difference of opinion, respecting the true meaning and proper acceptation of an important term, we can easily imagine the difficulties which a systematic writer must encounter in arranging the principles of chemical science. Nor can we be surprised at the variety of forms which have been contrived for conveying chemical instruction.

A work on the plan of the present has, at least, the advantage of being independent of difficulties of this nature, and is less liable to become obsolete in the progress of those improvements of which chemistry is yet susceptible.

Dr. Ure has adapted his dictionary to the student by instructing him in the order in which certain of his articles may be read, so as to form a system of elementary study. The arrangement which he advises is, we think, judicious. We hold it as a principle, that a system of chemical instruction should commence with the most general principles; that the student should have a characteristic outline of the nature and object of the study in which he is about to engage, from which he should be led to the details, in the most easy and gradual manner.

Knowledge thus obtained, will generally be found to be the most perfect and the most efficient, and we think that he who has adopted this plan, will meet with comparatively few of those facts, which, to the mechanical student, appear to be insulated beyond the reach of classification.

With regard to the minutiae of the present work, we can but express a general opinion of approbation: each article appears to have received a proper share of attention, and those to which the author has particularly directed the attention of his students, are so judiciously managed, as to fall very naturally into the order which he has assigned them in his introduction.

The article on chlorine, the history of which substance, it is observed, "marks an era in chemical science," is very well calculated to give a correct idea of the nature of that important sub-

stance, and to prepare the student for the elaborate discussions which the question of its elementary character has created. Although we do not expect works of this kind to contain minute details of all the phenomena attendant upon the various combinations of matter, nor, perhaps, all the circumstances which conspire to affix a peculiar character to a certain substance, yet we think that, in speaking of the nature of muriatic acid, a field, in which a number of chemists have reaped imperishable laurels, the ingenious experiments of the late professor Murray, ought to have received some attention.

We consider this eloquent and enlightened philosopher as the most formidable opponent that Sir H. Davy had to contend withal, in establishing the elementary character of chlorine; and, although we are now convinced that he supported the wrong side of the question, yet the zeal, undoubtedly founded in the purest motives, and the profundity of investigation which he manifested, entitle him to the respect of all who admire genius, or would be benefited by its exertion. We are the more particular upon this subject, which may appear to some of our readers to be somewhat foreign to the present purpose, on account of the term *subterfuge*, which an author applies to the arguments by which the disciples of Lavoisier supported their theory of combustion. Their ingenuity and industry entitle them to more respect than this term indicates.

We have particularly examined the articles to which Dr. Ure has directed the attention of the elementary student. A large portion of that on attraction is supplied by Dr. Ure. The student will find himself guided through the difficulties of this subject by a skilful hand. The experiments of Bertholet had a tendency to shake the confidence of chemists in the beautiful, may we not say, necessary doctrine of elective affinity and definitive proportion; any aberration from which, would be as repugnant to our ideas, as the infinite divisibility of the gamut would be to the musician. If there now remains any ground of objection to the term elective affinity, in the fullest extent of its meaning, it may be in the influence of caloric over the combinations of matter, many of which commonly exist in certain ranges of temperature.

Thus suppose the affinity of B to A is superior to that of C, the three bodies being in contact, the compound A B will result, but when exposed to a high temperature, the affinity by which they are governed is so far reduced as to become inferior to that of A C, the

explanation of which may be found in the disposition of B to assume an elastic state at a temperature which would not affect C. The decomposing influence of carbon over compounds containing oxygen, is probably owing to the extreme resistance of that substance to the divellent power of caloric.

The article *caloric* is from the pen of Dr. Ure, and reflects great credit on its author. There is, perhaps, no subject which has employed so much of the ingenuity of chemical philosophers as the investigation of the nature of caloric, and its effects on ponderable matter, nor is there any more replete with interest.

Dr. Ure does not express any opinion of the comparative merits of the hypotheses which severally ascribe the phenomena of heat and expansion to a material principle and to atomic vibration. The latter doctrine has lost much of its former popularity since the promulgation of Dr. Black's theory of latent caloric. Sir H. Davy's exertions for its restoration have been deservedly abortive. It requires the assumption of data quite as gratuitous as the existence of imponderable matter, and there is something repugnant in the idea of motion, which we cannot trace to a cause, and when, too, it becomes retrograde, requires, we think, a distortion of the rational faculties to trace it through its windings. The American editors have added some ingenious remarks in favour of the material doctrine.

Dr. Ure has enriched this article by numerous tables, exhibiting the various and comparative effects of caloric, on ponderable matter. They appear to have been constructed with great care, and from the most authentic data. Their importance, both to the student, and the practical chemist, is sufficiently evident.

The article *electricity*, contains a fault, of which we complained on a former occasion:* an opinion is here given, that the doctrine of the two electric fluids is "the less improbable" than that of Franklin, but this opinion is not supported by any thing in the shape of an argument. Our brethren in Great Britain are very fastidious in their choice between the French and American theories of electricity, nor do we expect to find any thing like unanimity between them on this subject, until a new doctrine shall take its rise in their own land.

There is no phenomenon exhibited by mechanical electricity,

* See Review of Thomson's Chemistry, Med. Rec. vol. 2.

that is not incompatible with the Franklinian theory; there are some, on the other hand, which cannot be satisfactorily explained by Du Fay's. If a metallic point be attached to a prime conductor charged positively, a luminous brush will be seen in the dark, proceeding from it, while the points which receive the fluid from the revolving cylinder, and are negative with regard to it, will each exhibit a bright star. It is well known in pneumatics, that when a fluid is violently propelled from an orifice, the diameter of the stream is continually enlarged; in other words, the fluid seems disposed to spread in all directions, as in the instance of the fire engine, the water from which, falls rather in a heavy mist and rain, than in a stream; and on the other hand, if we immerse the orifice of a tube in water, and draw the fluid into it by means of a piston, no single current will be formed in the mass of water, but it will flow into the tube from every direction, and all the motion which is produced in the general mass, is concentrated in one direction, at the orifice of the tube. Now we consider the luminous point, and brush of the negative and positive conductors, as strictly analogous to these properties of a ponderable fluid. But if, with Du Fay, we suppose that there are two fluids, moving in contrary directions, how shall we explain these phenomena? Why is it, that at the point of the prime conductor, opposite to the cylinder, these two streams produce a brilliant star, and at the other, where the same process is going on, a luminous brush appears? Again, if the insulated rubber of one electrical machine be made to communicate with the prime conductor of another of equal power, the prime conductor of the former, will exhibit positive or vitreous electricity. Now the first rubber is rendered resinous, by the action of the cylinder, and the prime conductor is, of course, vitreous; as the same action takes place in the second machine, its rubber also must be resinous, because its conductor is actually vitreous, but its rubber is in communication with the vitreous conductor of the first; consequently, in the same electrical state! How shall we reconcile this contradiction?

The style of the present work is generally clear and perspicuous, and, with the exception of a few such tautological expressions, as "unite together" "in combination together," &c. it is faultless. We observed, also, the terms *subsaturated* and *supersaturated*, which we cannot but think are very absurd combinations of words

To "*saturate*," according to Johnson, is "to impregnate till no more can be received or imbibed." It cannot, therefore, retain any meaning, in conjunction with the prepositions *sub* and *super*.

A large portion of the "Dictionary" has been supplied by Dr. Ure; and professor Hare has made some important additions to the American edition. Much credit is also due to Dr. Bache, for his careful revisal of the work, by which, no less than eighty errors in the English edition, have been corrected in the present.

Dr. Ure has made a favourable exhibition of his acquaintance with chemical literature. In the article blow-pipe (compound) however, we were surprised at an instance of deficiency in this respect. He has no excuse for being ignorant of the circumstance, that *all* the credit for the invention of this instrument, and important experiments performed with it, is exclusively due to Dr. Hare. What inducement he may have to countenance the plagiarism of Dr. Clarke, we know not. This gentleman may figure away on Mount Vesuvius* without a rival, but the blow-pipe can never place an honest laurel on his brow.

T. M. H.

ART. XV.—*A Practical Essay on Ringworm of the Scalp, Scalded Head, and other species of Porrigo.* By SAMUEL PLUMBE, Member of the Royal College of Surgeons of London, &c. 8vo. London, 1821.

THE diseases treated of in this little work, are, in general, so very unmanageable, that we gladly seize hold of every thing which promises to improve our knowledge concerning their nature and treatment. Without pretending to say much in praise of this work, either in relation to its literary or scientific merit, we admit that the author's "hope of having added something to the stock of our information," with regard to these diseases, is not altogether fallacious.

Preliminary to the more immediate objects of his book, the au-

* See a treatise on the Oxy-hydrogen blow-pipe, and the volcanoes, by Dr. E. D. Clarke, &c.; also, Review of the same, Med. Rec. vol. II.

thor makes some remarks "on the origin of the hair, and its influence in diseases situated on the scalp." The hair originates, according to him, in the adipose structure beneath the cutis, and is entirely independent of this membrane, as regards nourishment, &c.

"The fact," he says, "that the scalp is pierced by the hair and has little or no share in its production or nourishment, I am particularly desirous of impressing upon the attention of my readers. Reasoning from analogy we should be justified by this consideration only, in concluding that the latter *may* possess when the former is in a state of disease all the properties of extraneous substances. As regards the common ringworm of this part, it will be uniformly found evincing these characteristics in the mildest as well as most severe forms of the disease." P. 16.

Porrigo Scutulata, or Ringworm of the Scalp.—This variety of porrigo, is characterised by the falling off of the hair of the affected part. When first noticed, the scalp appears somewhat scurfy and slightly red; the hair on the affected part "is thin, and irregularly scattered over it; the greater portion appearing to have been removed by the roots, while some have broken off near the scalp, the roots of which still retain their situation. Those which remain apparently growing on the part, will be found to drop off on friction, or to have, on being pulled, scarce any hold on the scalp." These symptoms continue for an indefinite time, until, at length, a considerable degree of itching and irritation ensues, and a number of minute straw-coloured pustules denominated *achores* make their appearance.

"Though the *achores* mentioned by different authors who have preceded me as being the most important feature of this disease, are not seen in its commencement, they are usually soon making their appearance after the hair begins to fall off. The itching and irritation commencing at the same time, the child who is the subject of it soon ruptures a few of them, and spreading by the frequently repeated application of the nails to the spot, their contents cover the adjacent parts of the scalp, extends the disease with great rapidity upon it; the same destruction of the hair and subsequent pustulation marking its progress.

"When pustules are noticed they are uniformly found with hairs growing through them; and if the disease has existed for a considerable length of time and destroyed the greater part of the hair of the part, such pustules are found proportionately reduced in number; but still surrounding the few straggling hairs which re-

main : each single minute pustule appearing to be dependant on the hair in its centre.

"If the hair, as sometimes happens, be completely eradicated from the spot where the disease first appears, the skin assumes an apparently healthy character: the disease as regards this particular spot may be said to have exhausted itself." P. 23.

This description of the disease does not differ from that given of it by Dr. Willan, with the exception of the statement made by the latter, that the pustules make their appearance at its commencement. When once formed, the disease spreads only to a very small extent by the application of the matter secreted by the pustules; and this, our author observes, "is an important fact in its pathology and treatment," to which he has occasion to refer when speaking of its treatment. According to Dr. Willan, all the different species of porrigo may be produced from the same contagion. This is contrary to the observations of our author; "not only have the results," he says, "of the common accidental occurrence of the different species of the disease afforded proofs of the contrary, but experiments instituted for the purpose have invariably supported the opposite conclusion."

When the fluid secreted by the pustules "is allowed to accumulate, scabs are formed from it upon the surface; and it is in this state of the disease which appears to be understood by the term scalled head."

Our author does not agree with Dr. Underwood, in the opinion, that the disease originates in the roots of the hair. If this were the case, he says, "it is highly probable that pustulation would, in all cases, appear at a much earlier period of the disease than it does;" since it is difficult to conceive that the excitement of the disease from the application of matter to the skin should at once evince itself in the roots of the hair, without a decided suppurative action having here been produced. That pustules do *not* appear when the hair *begins* to fall off, I may adduce as a proof, therefore, that it is not here that the disease originates. This peculiar feature, the falling off of the hair, is much more easily and satisfactorily explained by referring it to the influence of the same principle on which its separation after scarlatina and other eruptive diseases appears to depend.

"Whatever difference of opinion," he continues, "I may have entertained on this particular point as to the seat of the disease at its

origin, I have already stated my idea that the hair is still exercising a great influence in keeping it up, when once established : and though I am not prepared to deny the possibility of the occurrence of pustules where no hairs exist ; experience warrants the assertion that they are in most cases produced by the irritation, which the presence of the hair, situated in the already diseased skin, is calculated to excite. Several, and indeed most authors who have preceded me in the description of the disease, have noticed the fact of its cessation on the spots where the hair has been eradicated. So far, the above assertion is somewhat supported ; and I may further observe that the application of the contents of the pustules to the skin of other parts ; though sometimes producing an affection resembling that described in a preceding page : yet have I never seen any thing like a pustule following it except when such part was thickly covered with the finer kind of hair, when some little moisture has been now and then observed." P. 51.

It appears, therefore, from what our author says, that the pustules occur only where hairs exist, and that each pustule has commonly a hair in its centre ; " and bearing in mind what has been said, as to the probable influence of the hair upon the scalp, where the cutis is actively inflamed ; we may be warranted," he says, " in the conclusion that the *specific irritation of the disease obtains an accession of strength from the local irritation of the hair, where it penetrates the scalp ; and that the formation of a pustule is the consequence of such accession.*"

Treatment of Ringworm of the Scalp.—As this disease is evidently independent of constitutional causes, general remedies are of course entirely useless. The first step to be taken in the treatment is " the *complete removal of any hair remaining on the part which may appear to come away easily and without pain to the patient.*" This ought to be done whether the pustules be numerous or not. No great force should be employed in pulling out the hair ; that which ought to be removed comes away with ease ; it is only necessary to try the hair by pulling it gently with a pair of small forceps ; if it be situated in a diseased part it will be readily extracted, with very little pain to the patient. The hair, " which is apparently healthy surrounding the margin, should be submitted to the same test ; for it not unfrequently happens, that the hair will easily separate a short distance from this, without pain, and lead to the discovery of the mischief to a greater extent than was first suspected." After the hair has been thus removed from the diseased part, our author recommends, as a preliminary step to any medicinal application, that the contents of the pustules

should be discharged as much as possible by "pinching up the skin between the finger and thumb, and carefully washing away what is thus forced out."

Shaving the part will not answer as an effectual substitute for depilation; it will even have an injurious effect by leaving the stumps of the hair "sticking in the skin, and exciting a considerable degree of subsequent irritation."

The hair having been thus removed, and the contents of the pustules evacuated, we are next recommended to make "*some astringent application possessing the power of taking from the secretion its infectious properties; and at the same time sufficiently powerful to constrict the vessels from which it flows, and lessen its quantity.*" He thinks that the best application for this purpose, is very finely powdered sulphate of copper; this is to be rubbed in its dry state, on the affected part, and then washed off. The head should be carefully examined every morning; if any new pustules have come out, they should be opened, their contents evacuated, and the sulphate of copper applied in the manner just mentioned.

"After two or three repetitions of this application, no fresh appearance of pustules takes place, and the circle of the disease is marked by small thin scabs of a darkish colour, and the same characteristics in other respects as the common exudation from abraded surfaces of the cutis. These scabs separate in a few days, bringing with them a few of the remaining hairs which have separated, and leaving a shining red and irregular surface, which gradually loses its inflammatory character, having now and then a little scurf forming on it till the new hair begins to appear." P. 64.

With regard to the propriety of pulling out the hair from the affected spot, our author is diametrically opposed to Dr. Willan. This very eminent writer asserts that *depilation* "does more mischief to the scalp in one day, than the disease, left to itself, would effect in three years." We confess, however, that the author's arguments in favour of this practice appear to us quite reasonable. By means of a pair of forceps the hair can be conveniently removed from the parts where the disease exists, without giving any particular uneasiness to the patient; "the slightest degree of force is sufficient to remove such hair where force is at all necessary; and no pain will be found to attend it."

This treatment will in general cure the disease in a short time. Yet, in some very obstinate cases, other measures do occasionally become necessary.

"It will be observed," says the author, "that the treatment I have described in the preceding pages, as applicable to the state of simple ringworm, requires some modification in those long established cases, where great accumulation of scabs ; portions of ulcerated surface ; and a high degree of confirmed irritation of the vessels of the part, exist. In a case of this kind the difficulties of subduing the excessive irritation of the disease were for a considerable period considered unsurmountable. Fomentations, poultices, and cold lotions, were successively, and diligently applied ; each for a sufficient length of time to have produced, under common circumstances, an effectual check to inflammatory action. Still the redness and heat of the part remained obstinate, and where a few straggling hairs were seen, a constant production of new pustules were discovered, as fast as others were removed. A total extirpation of the remaining hair over the whole surface was eventually accomplished ; the ulcerated portions healed ; and the fluid secretion diminished : the inflammatory redness and heat of the part continued however ; and around the healthy margin, new pustules and scabs affecting the sound hair were every day appearing.

"The preceding applications, with others of various descriptions, were changed one for another without success, till a small spot whence the hair had been first removed, was occupied by fresh ; and immediately after pustules appeared among it. It appeared now, that any further attempts to get rid of the disease would be frustrated by the increased irritation of the new hair, which might be speedily expected to spring up over the greater part of the surface : but except on the spot I have mentioned, no more hair appeared ; and I was led, shortly after, to endeavour to apply pressure by means of adhesive straps and bandages, with the cold lotion in conjunction. By the diligent application of these for two or three weeks, a material change was produced ; and the scalp began to assume an appearance more nearly approaching to health. To completely subdue the diseased action was a work of much time ; but I had the satisfaction of seeing eventually, (as I have already stated in a previous allusion to this case) the part completely covered with long and glossy hair.

"In other cases of a similar character of four and six years standing, I have experienced proportionately smaller degrees of obstinacy ; but in no single case has the plan last mentioned ; pressure and cold applications combined ; failed in subduing the disease. In the majority of these cases the necessity of the extraction of the hair was frequently forced on my attention, by the obstinate repetition of pustules where any appeared on the diseased surface ; and I have consequently made this a preliminary step in every subsequent case to the above plan of treatment." P. 75.

We do not find any thing novel or interesting in the remaining portion of this little book, and shall not therefore pursue our analyses any further.

E.

ART. XVI. *On the Nature, Symptoms, and Treatment, of Amaurosis, or Gutta Serena.* By JOHN STEVENSON, Esq. Member of the Royal College of Surgeons, &c. 8vo. pp. 277. London, 1821.

THIS book contains some sensible and useful observations on gutta serena. As is usual, however, in this book-making age, we find it encumbered by a good deal of unnecessary and uninteresting disquisition. There is too, we think, a want of proper arrangement in the materials of the fourth chapter, which gives a degree of confusion and indistinctness to the author's sentiments detailed in this part of his book. We are, however, in the main, pleased with this performance, and, therefore, present our readers with a pretty full analysis of it, without adding any further comments of our own, either upon the subject, or the author's manner of treating it.

The book is divided into four chapters. I. Definition and symptoms of Amaurosis. II. Prognosis of the disease. III. Its exciting cause. IV. The mode of treatment, with an appendix.

"Amaurosis," he says, "may be defined that disease of the eye which consists in a diminution or total loss of sight, without any other visible imperfection in the organ than a dilated and immovable state of the pupil." As a general definition, this cannot, of course, be considered as applying to the varied appearances of each particular case. It is, indeed, often a matter of very considerable difficulty to pronounce with perfect assurance on the nature of its real character. Richter considered "a degree of *squinting* as the only symptom inseparable from gutta serena." "Bearing in mind," says Dr. S. "that a peculiar cast or confirmed squint, is frequently owing to a defective action only of one of the external muscles of the eye-ball, to a leucomatous speck in the centre of the cornea, to sympathy with a disordered state of the *primæ viæ*, and to morbid habit acquired in early life; when strabismus exists in connection with impaired or lost sight, as a coincidence, and independent of any of the causes assigned above, it may be regarded as one of the least fallacious of the pathognomic symptoms of amaurosis."

Our author does not regard a preternaturally dilated and immovable state of the pupil, as a certain mark of amaurosis, when considered independently of other concomitant appearances. He states that he has known the pupil to remain permanently dilated "after the operation for the cataract" by the absorbent practice, and yet

the sight to remain nearly perfect. It is known too, that perfect amaurosis does sometimes exist, unattended by any changes in the natural functions of the pupil. The author mentions a case of perfect blindness from gutta serena, in which the iris of both eyes was readily affected by the admission of light to it. Janin, Richter, and Smucker, mention similar cases. Mr. Travers thinks that the cause of those cases of perfect amaurosis, in which the contractile and expansile powers of the iris remain nearly in a natural state, is seated *within the cranium*. If this observation be correct, our author supposes that it may be explained in the following manner: "As the involuntary motions of the iris are wholly subservient to the stimulus of light upon the sentient texture of the eye, the retina may still be susceptible of those impressions, as an instrument of vision, with which the iris has been accustomed and continues to sympathize, although they prove unavailing, as far as regards sight, on account of the bar opposed to the subsequent transmission of those impressions to the brain, the seat of sensation and perception."

Amaurosis is also not unfrequently attended by a fixed and contracted pupil. This species, the author observes, commonly proceeds from a violent internal ophthalmia; and is usually accompanied "by an opacity of the capsule of the lens, with which the posterior surface of the iris has become agglutinated, and constituting the complicated adherent capsular cataract."

It appears, therefore, that "the various conditions of the pupillary aperture, considered abstractedly, do not warrant us in deducing any positive opinion relative to the precise nature and essential character of amaurosis, nor in forming a decided judgment as to what will be the probable result of the case. For example, the lively or wholly torpid condition of the iris does not, individually, afford any certain criterion to enable us to determine whether the disease be curable, or incapable of relief; since it sometimes happens that amaurosis, when recent and properly treated, is remediable, although it may be associated with a fixed and widely expanded pupil; whilst, on other occasions, the disorder proves absolutely intractable, notwithstanding the iris may possess its natural power of action. Nor are instances wanting in which the pupil has regained its suspended capacity of motion, without having been followed by the subsequent restoration to sight. In the course of my practice I have had the mortification to meet with two cases of this description, in both of which, though encouraged to anticipate eventual success by the pupils having gradually recovered and retained, for a time, their full power of action, my endeavours

to re-establish the functions of vision were, notwithstanding, completely frustrated." P. 24.

Important information may, notwithstanding, be derived from a close examination of the pupil, without reference to its size or motion. It occasionally exhibits a greenish tint "resembling that of the water of the calm sea;" and, at other times, a diffused muddy turbidity. This latter appearance has caused the disease to be mistaken for cataract, and to be treated as such. The author observes, that "the worst and altogether incurable species of gutta serena, is that which is marked by an opaque, dull, whitish appearance at the fundus of the concave surface of the eye-ball, answering to the situation of the retina, in a morbid alteration of which nervous tunic, it indeed consists." The disease which has been called cancer of the eye, and medullary fungus of the retina, exhibits in its commencement, when examined in a good light, "an opaque white spot, or projecting chalk-like or pearly substance, at some part of the concave face of the retina, which is frequently covered with a net-work of coloured blood-vessels." At first, it is not attended with pain. It gradually enlarges, and successively involves the several structures of the eye, until this whole organ is rendered "an undistinguishable disorganized fungued mass," and the disease acquires all the painful and fatal character of cancer.

Another form of amaurosis is mentioned, in which, instead of the foregoing appearances, a silvery or yellowish spot is seen at the bottom of the eye, near the axis of vision, and which has been attributed to an opacity of the retina, directly opposite the entrance of the optic nerve. Our author, however, is inclined to consider it as arising from a diminished secretion of the black pigment.

"The eye, in this species of amaurosis ceasing to resemble, by its dark concavity, a camera obscura, like that of the albino, is greatly distressed by strong light, and the partial illumination of objects, by exposure to which the sight is very much confused and temporarily impaired." P. 40.

Amaurotic patients have their sight very variously affected.

"Two patients whom I attended some time since, both females, under twenty years of age, possessed the power of discerning occasionally, and for a few minutes at a time, the small letters of a printed book, when in an instant, and without any assignable cause, they would become so blind as not to be able to distinguish, with any degree of precision, the largest object around them." P. 44.

The author also adverts to those anomalous appearances of depraved sight, "characterized by the imaginary and false perception of various external bodies, either fixed or floating before the eyes, as sparks, flies, colours, &c. the prototypes, or reality of which, do not exist." With regard to these appearances, he observes, that when not accompanied by "pain in the forehead or orbit, with vertigo, tinnitus aurium, deep-seated uneasiness in the ball of the eye, with irregular pupillary aperture and opaque humours," they are not to be regarded as alarming symptoms; "and remediable or not, according to the nature of the cause which produces them."

An inability to adjust the eye to *near* objects, without fatigue and confusion of sight, is said to be a characteristic feature of incipient amaurosis. Scarpa ascribed this affection "to a debilitated state of the *muscles* of the eyes, in consequence of which, the patient cannot conveniently accommodate the eye-ball to very near objects, or maintain it for a length of time in that position." Our author, however, considers it more likely to depend on "an actual diminution of the nervous influence in the sentient texture of the eye;" and he relates a case much in point, confirmatory of this opinion.

"I will only observe," he says, in concluding this case, "that the plan of treatment which proved completely successful, forbids the supposition that the disease in question depended upon direct local debility, either of the external muscles of the eye-ball, or of the retina, and tends to confirm the doctrine I shall hereafter endeavour more fully to illustrate, viz. that the greater part of amaurotic affections which admit of relief, are the result of an inflammatory, or of a congestive state of the deep seated textures of the eye." P. 59.

The author observes that the disease occasionally shows an hereditary tendency. He has seen it occur "in one or more members of particular families, in successive generations, the children so attacked becoming blind, at about the same period of life." Having given a general analytical account of amaurosis, the author proceeds to a more connected and regular history of the disease. It sometimes makes its attacks very suddenly. The author has met with cases that came on in the course of one night. Instances of this kind are, almost always, "of the functional species," and remediable. More frequently, however, it makes its approaches very slowly, fluctuating in its progress, from temporary improvements to more perceptible augmentation of its symptoms.

“Under ordinary circumstances, the patient first becomes sensible of a somewhat weakened sight, or rather of an interrupted state of vision, manifested by certain parts of small objects, as for example, the letters, or lines of a book, being at one time more distinctly visible than at another, the sight of which he alternately loses and regains by shutting or rubbing his eyes, or by moving his head in different directions. This symptom, which, when it occurs, is the earliest intimation of the commencement of the disease, is to be regarded as a proof of the impaired sensibility of the optic nerve.” P. 64.

“On other occasions, the patient has a perception as if a spider’s web, or thin gauze, were interposed between his eyes, and every object at which he looks. He is apt to believe that he sees a more or less illuminated surface, studded with black specks; or is annoyed by the imaginary appearance of a great variety of external and differently coloured motes, threads, or small undefined and fantastic figures or objects, (*muscæ*) fixed, or floating before him, which he instinctively attempts to remove with his hand, conceiving them to be the sole impediment to his vision, until, taught by experience, he knows that they are merely ocular hallucinations, indicative only of a depraved state of the organ of sight. The eye, at this period of the disease, begins to lose somewhat of its natural brilliancy and lustre, and the iris, in the majority of instances, becomes more and more dilated, sluggish in its movements, and proportionally less sensible to the impression of light. Should one eye only be affected, its iris will still act in accordance with that of the sound organ, provided both be allowed to remain open at the same time; but if the latter be closed, the pupil of the really diseased eye will be found to have lost its power of motion, on the admission of the usual degrees of light. A young practitioner, by availing himself of this fact, may avoid an error which he might otherwise be liable to commit; namely, of incautiously pronouncing the sight of both eyes to be equally perfect, from observing that the pupil of each contracts alike on exposure to the stimulus of light; a circumstance owing entirely to the sympathy of consent producing this effect in consequence of omitting, during the examination, to shut the palpebræ of the sound eye.” P. 67.

Exciting causes.—The author advances the opinion that “the greater number of the exciting causes of amaurosis, of the nature and *modus operandi* of which we have any distinct conception, produce their morbid effect on one common principle;” and this, he says, “I shall briefly define to be *pressure*.” Observation has, indeed, abundantly proved the fact, that *pressure*, in whatever way produced, upon a nerve, has the effect of impairing or totally destroying its functions.

“Let us apply this doctrine,” says the author, “to the elucidation

tion of amaurosis, which has been explained to consist in the diminution, or total loss of sensibility in the nerve appropriated to vision. And if it can be shown, that the greater proportion of cases of that disease are connected with topical pressure, we shall have made no inconsiderable advances towards establishing, not only a plain and consistent theory relative to its nature, but likewise a mode of treatment founded upon it, at once rational and scientific, and as such promising a share of success commensurate with the circumstances of the case." P. 88.

The author admits, however, for it cannot be denied, that this disease may and does occasionally depend on causes very different from that of *pressure*. It may, for instance, be produced by "in-
anition from great and sudden loss of blood, or of debility from protracted and exhausting diseases." Narcotics, also, have been known to produce the disease. "With these reservations," he observes, "the doctrine of pressure is, I conceive, as universally applicable as it is generally true." The pressure may operate either on the optic nerve situated within the cranium, or it may act on "the expanded termination in the globe of the eye." Among the causes which operate in the former way, are abscesses, different kinds of tumours, or earthy concretions in the cerebrum, situated so as to press upon the origin or course of the optic nerve. Among the causes of compression, which operate more immediately on the retinal expansion, may be enumerated, a morbid increase of the contents of the eye; "the dislocation and subsequent pressure of an enucleated lens upon the retina, a preternatural interstitial fluid between the retina, or choroid, or between the latter tunic and the sclerotica." Amaurosis, however, appears also, sometimes, as an idiopathic complaint, depending on a primary organic derangement, or morbid condition of the thalamus opticus itself, or of some other portion of the optic nerve. Dissection, however, does sometimes not develop the least trace of organic change in the optic apparatus. In reference to cases of this kind, Mr. Ware thought "that one probable cause of gutta serena, in not a few instances in which no account has been given, and especially in those cases where blindness has been accompanied with an inability of moving the upper eye-lid, consists in a dilatation of the anterior portion of the circulus arteriosus." The same excellent writer adverts to another vessel, whose preternatural turgidity may act as a compressing cause on the optic nerve. It is the arteria centralis retinae, which passes directly through the axis

of that part of the nerve called tractus opticus, and ramifies extensively upon the internal surface of the retina. It is, therefore, quite reasonable to conclude, that an increase of its capacity must in some degree compress the medullary substance of the optic nerve.

Our author, however, is not willing to ascribe to either of these causes a great share of influence on the production of gutta serena. He believes, "that all the phenomena detailed as characterizing the disease supposed to spring from these respective vessels, admit of an easier and less exceptionable solution, by referring them to organic cerebral affection, or to a topical congestion of the capillaries belonging to the retina."

"It appears to me, therefore," he adds, "that it is to the circulating system, as influencing the sentient function of the retina, we must look for an explanation of many of the phenomena, and the most probable and rational mode of curing several of the more obscure diseases of the nerve of vision.

"From the course of the ophthalmic arteries, and from their peculiar distribution throughout the internal parts of the eye, it cannot reasonably be doubted that an uniform, an equal current of blood is indispensable to the healthful economy of the organ. And it is easy to comprehend, how any material disturbance in that circulation may interfere with the function of the retina, and prove the means of exciting most of the phenomena occasionally incident to vision, and which are scarcely indeed, if at all explicable, upon any other theory. It is, I may repeat, exceedingly probable from analogy, supported by well ascertained facts, that the greater part of the various and anomalous affections of the retina, characterized by impaired or depraved sight, without organic læsion, are the result of particular changes in its vascular structure, subsequently extending to and affecting its medullary lamina, although we are not, in the present state of our knowledge, able to point out the exact nature of those respective changes upon which the morbid symptoms depend." P. 107.

He then goes on to adduce a variety of facts, in elucidation of these observations. We have not room, however, to give a particular account of them; and but merely observe, that, to our minds, he has not succeeded in establishing satisfactorily his sentiments in relation to etiology of amaurosis. We cannot doubt, indeed, that the state of the blood-vessels with regard to their fulness or flaccidity, in the organs of vision, and especially in the tender texture of the sentient retinal expansion, must exercise a very con-

siderable influence on vision ; nay, we are even of opinion that a temporary or habitual turgidity of the vessels in these organs, may, and actually does often constitute the occasional cause of gutta serena ; but, we nevertheless think, that the proofs on this point, are, as yet, inadequate and unsatisfactory.

Having argued, pretty extensively, upon this subject, the author thinks himself warranted to lay down the following corollaries, viz.

“ That a certain degree of fulness of the blood-vessels of the retina is essential to a healthful state of the organ ; that an increased plethora, or inflammatory condition of them, deranges their function, and produces the disease termed ‘ Weakness of Sight ;’ that more active symptoms, of the same nature, constitute acute inflammation of the retina, or deep-seated ophthalmia. In the chronic state of the disease, the increased bulk produced by the distention of the vessels of the lamina of the retina, occasions pressure upon its medullary texture, and deprives it of its natural sensibility, or, in other words, induces paralysis ; amaurosis, as already remarked, being a common result of internal inflammation of the eye. Between these different degrees of a plethoric and truly inflammatory condition of the immediate seat of vision, there may be an almost infinite number of shades and gradations, occasioning that variety, and anomalous character in the symptoms, which are observable in the different affections of the retina.

This view of the subject, whilst it is not incompatible with the soundest principles of pathology, holds out more consolatory hopes of relief, by pointing to a more rational and practical mode of treatment, than the vague and undefined notions usually entertained relative to the supposed exhausted state of the nervous influence in these respective derangements of the organ of vision.” P. 132

After making many very interesting observations in reference to his opinions on this point, he proceeds to consider another very obscure class of exciting causes of amaurosis. These are such as are primarily seated in the abdominal viscera, and whose agency, though inexplicable, is, nevertheless, often conspicuously manifested. The disease produced by these causes “ constitutes the symptomatic species, and is for the most part, when treated at an early period after its commencement, a tractable form of the disease. But as we know not, with certainty, in what peculiar changes in the condition of the nerve of vision the cessation of its function in these cases depends, we are not acquainted with any remedy, by the application of which to the eye itself, we can ensure the resumption of its healthy economy. As the defective sight, in the instances

alluded to, arises from a remote origin, our attention should of course, on such occasions, be directed to the primary seat of the complaint, and when its source is clearly ascertained, and the remote cause wholly removed, there will be good grounds for anticipating the subsequent and spontaneous recovery of sight."

The author concludes this part of his subject with some observations on that species of the disease "supposed to arise from causes which operate indirectly upon the nerve of vision, by inducing a sudden and very considerable reduction of constitutional vigour, or whose debilitating influence is confined to the eye itself." This species of amaurosis, the author observes, may seem to militate irresistibly against the congestive doctrine he endeavours to establish. He answers this objection, however, by observing that "very similar symptoms present themselves, which arise, notwithstanding, from diametrically opposite conditions of an organ. A congestive state of the retina may depend upon local relaxation and debility, or it may arise from the actual existence of high arterial action in the capillaries, and produce amaurotic symptoms. Likewise, a positive deficiency of blood in the retina, in consequence of which its medullary substance is imperfectly injected, exhibits, like that from vascular congestion, the phenomena of impaired vision, dilated pupil, deep-seated pain, though of a peculiar kind, occasional muscæ, and vertigo. These different sources of the disease, it is of the highest importance accurately to discriminate, as the mode of treatment required for these respective species must necessarily be the reverse of each other, and bleeding, which, in the one kind is most beneficial, would tend to aggravate every symptom in the other."

The author has known more than one instance of gutta serena, which seemed to have been occasioned by sudden loss of large quantities of blood. Richter says, that this disease has been produced by long continued diarrhœa, cholera morbus, and great loss of blood.

Cure of Amaurosis.—If the disease arise from an alteration or destruction of any part of the optic nerve, in consequence of "disorganizing inflammation, or medullary fungus, or adventitious substances formed within the cranium, the orbital cavity, or the globe of the eye itself;" or if the retina be pressed upon by "the diseased state of the tunics, or humours of the eye," it is called *organic*

amaurosis. The majority of such cases are, of course, altogether incurable. "Hopeless, however, as is the greater number of instances of gutta serena proceeding from the causes just alluded to, there is fortunately a considerable list, by way of distinction termed *functional*, which, more frequently than is usually believed, admit of palliation, and on many occasions complete cure." Amaurosis is either *idiopathic* or *symptomatic*. By far the greater number are *symptomatic*, or the consequence of some pre-existing disease. Although the causes of the functional species are very various, yet, it is generally "connected with an inflammatory or congestive state of the vascular texture of the deep-seated parts of the eye." Functional amaurosis is also divided into *acute* and *chronic*. The former is caused and accompanied by increased arterial excitement in the retina, or in the surrounding parts of the eye; the latter arises from local congestion in relaxed and debilitated states of the system.

"It appears, therefore, that the greater number of the two descriptions of functional amaurosis, is probably connected with a locally accelerated or retarded circulation, occasioning alike a preternatural accumulation of blood in the deep-seated vessels of the eye, and affecting either primarily or secondarily its sentient texture, in the form of high arterial excitement, or of chronic venous congestion; facts which should ever be borne in mind in the treatment of the disease." P. 190.

From these views of the nature of gutta serena, the author draws the following indications of cure: "To relieve the retina from vascular excitement or oppression, by general or topical depletion, and by other means calculated to derive from the part affected, by removing obstructions and equalizing the circulation, and finally by restoring the tone of the vessels and the impaired energy of the nervous texture of the eye."

If the patient be plethoric, and the disease is attended with symptoms marking its acute form, both general and topical bleeding must be employed promptly and copiously. "A much larger quantity of blood must be drawn," says our author, "in the primary retinal, or choroidæal inflammation, than in common cases of ophthalmia." Drawing blood from the temporal artery or jugular vein, seems to be most efficacious. Purgatives are important auxiliaries to the lancet. These remedies have, indeed, been recommended as a principal remedy in gutta serena, by nearly all who have writ-

ten on this disease. The *modus operandi* of evacuants in the cure of opthalmic diseases, is thus concisely and lucidly explained in the present work :

“If we duly consider the great sympathy which exists between the eye and the *primæ viæ*, that in young persons especially, indigestible colluvies, or the presence of worms, is a frequent exciting cause of one species of inflamed eye, the *ophthalmia verminosa*, that purgatives excite a powerful counter-irritation, at the same time that they deterge the alimentary canal, and diminish the quantity and momentum of the circulating fluids, by preventing the chyle from entering the lacteals, and by emptying the numerous exhalents and excretory ducts which open into the bowels, we cannot doubt their being admirably fitted to relieve congestion upon the organ of vision. Are they not indeed universally and successfully resorted to in all cases in which the blood is impelled with unusual violence towards the head? ‘*Gravem epidemicam ophthalmiam describunt medici Vratislavienses cum vehementi capitis dolore et cæcitatæ secuturæ periculo junctam adversum quam nil erat utilius quam profluvium alvi sive sponte naturâ motum, sive pharmacis excitatum.*’ ” P. 200.

When the more urgent inflammatory symptoms have been in some degree subdued, “the remaining congestive state of the vessels may be safely confided to the application of leeches.” Mercury may also sometimes be exhibited advantageously.

If the pupil has a tendency to contract, or has already formed slight adhesions to the lens, in consequence of the choroidæal inflammation extending to the iris, “the application to the eye of a filtered solution of equal parts of the extracts of belladonna and stramonium must on no account be omitted.” If the symptoms have succeeded to the suppression of some accustomed discharge, we should endeavour to reproduce it.

A very different mode of treatment is required for the *chronic* form of amaurosis. If we extract blood at all here, it must be in small quantities, and taken by means of leeches or cupping, from the parts surrounding the eyes. Blisters will also be of great service. By the ancients, and also by the late Mr. Ward, sternutatories were much recommended in the cure of amaurosis. Some of the continental surgeons have advised exposure of the affected organ to the full glare of the meridian sun, with a view of exciting the torpid retina. The author states that he has heard of a man “who had laboured under blindness for many years, from which he suddenly and unexpectedly recovered, by exposing his eyes for

some minutes to the vivid rays of the sun during its greatest splendour." The author speaks very highly of *dry cupping* as a remedy in chronic amaurosis.

"I must now introduce to the notice of my readers a mechanical remedy which has not, I suspect, been adopted for the cure of amaurosis: namely, *dry-cupping* applied to the ball of the eye, and its appendages. By carefully fitting a well-adapted strong glass fitted with an exhausting syringe upon the edges of the orbit, the instrument may be made capable of exerting a more or less powerful influence upon the organ of vision, in proportion to the extent to which the atmospheric air contained in the cupping-glass is exhausted. The effect of its application is to occasion a great redness and tumefaction of the eye-lids, an immediate distention of the vessels of the conjunctiva, and a bulging forward, or protrusion of the whole globe of the eye; the obvious tendency of which must be to relieve the deep-seated vessels by attracting the blood to the superficial order, and thus to produce a manifest and rapid alteration in the whole circulating system of the organ. I am informed by the gentleman who first named the remedy to me, that in one instance it was had recourse to with the happiest success, the patient being perfectly restored to sight, although a variety of means had been previously adopted without the smallest perceptible benefit.

"A pauper, twelve months deprived of sight by an attack of amaurosis, lately called to solicit my advice and assistance. The case appearing a fair object for experiment, I determined to try the effect of dry-cupping. The patient complained of a sense of uneasiness in the eye and around the orbit, vision was completely extinguished, and the pupil remained fully and immovably dilated, when exposed even to the strongest light. A nobleman who happened to be with me witnessed the result of the operation. To our mutual surprise, immediately after the apparatus was removed, when the organ exhibited the appearances above described, the poor man exclaimed with delight, 'Sir, I can *now* see your fingers moving!' The pupil instantly recovered its power of contraction, and the pain, of which he had before complained, wholly subsided. The extraordinary and very decided effects of the remedy just alluded to in the instance under consideration, added to what I have heard on the subject, are sufficient to convince me, that dry-cupping, used in the manner directed, constitutes a very efficient agent in the treatment of amaurosis; and as such I do not hesitate to recommend it to my professional brethren, as fully entitled to their serious attention and future trials." P. 216.

He does not speak favourably of electricity as a remedy in this disease. He says, that in all instances which he has known it resorted to, he has found it to aggravate the symptoms of the complaint. Chronic amaurosis being often unequivocally connected

with visceral obstructions, much benefit may be derived in such cases, by the judicious employment of mercury. "For, no fact in pathology is better established, than that an interrupted circulation through the system of the vena portarum is productive of cerebral plethora, occasionally terminating in that species of apoplexy which, in reference to its origin, has by nosologists been termed *apoplexia hepatica*."

Little value is attached by our author to the various internal remedies that have been supposed to possess peculiar remedial powers against this complaint, such as *arnica*, *valerian*, *euphrasia*, *camphor*, &c.

In the short appendix, which is added to this volume, several very interesting cases of *gutta serena* are related, illustrative of the author's pathology and treatment of this disease. We have not room, however, to continue our analysis. Enough, it is presumed, has been given, to afford the reader a sufficiently extensive view of the leading sentiments contained in this book. E.

ART. XVII. *A treatise on Acupuncture ; being a description of a Surgical Operation, originally peculiar to the Japanese and Chinese, and by them denominated Zin-King, now introduced into European practice, with directions for its performance, and cases illustrating its success.* By JAMES MORSS CHURCHILL, Member of the Royal College of Surgeons, in London. 12mo. p. 86.

THE author of this little work observes, very truly, that, "if a rational theory, built on sound logical reasoning, be the only evidence to which any value can be attached, then will his labours be unavailing and fruitless." For it must be admitted, that it would be impossible to find any thing in medicine more inexplicable, than the effects which are said to be produced by "*acupuncture*." If, however, the consequences alluded to, do result from this operation, it matters very little, in point of practical, and, therefore, real importance, whether we can reason satisfactorily upon the circumstances, or not. We have heard one of our most intelligent friends at once to declare his disbelief in the extraordinary effects ascribed to *acupuncture*, on the grounds of its being impossible

to offer any rational explanation of it, or of perceiving any relation whatever, between the cause and its supposed effects. If we reflect, however, but for a moment, on the consequences which follow the application of some of our most approved medicinal agents, we may be readily convinced, that in relation to their *modus operandi*, we are just as much in the dark, as we are with regard to that of the operation in question.

Acupuncture is an operation which, as its name implies, is performed by piercing different parts of the body, according to the seat of the pain which it is intended to remove, by means of a very delicate needle-shaped instrument, a few inches in length, and about the thickness of a common sewing needle. This operation "is of Asiatic origin, and China and Japan peculiarly claim it as their own." "My attention," says the author, "was lately directed to it by my friend Mr. Scott, of Westminster, who, as far as my knowledge goes, was the first who performed it in England, and some successful cases which I witnessed in his practice, assured me of its efficacy, and led me to its adoption. *The success of my own subsequent practice warrants recommendation of it, in almost any terms I could give it.*"

Mr. Berlioz, of Paris, who has written an excellent memoir upon this subject, and who appears to have employed acupuncture pretty extensively, speaks in the highest terms of its effects. "The practice of the operation," he says, "is attended with but little pain, and the success of it is so prompt, that the disease is alleviated, or entirely ceases, as soon as the needle has been introduced the depth of a few lines. In the space of one or two minutes, a patient, whose sufferings drew from him tears, exclaims he is quite cured."

The instrument which our author employs, is nothing more than a common sewing needle, adapted to an ivory handle. The mode of performing the operation, is thus described. "The handle of the needle being held between the thumb and fore finger, and its point brought into contact with the skin, it is pressed gently, whilst a rotatory motion is given it by the fingers and thumb, which gradually insinuates it into the part, and by continuing this rolling, the needle penetrates to any depth with facility. The operator should now and then stop to ask if the patient be relieved, and the needle should always be allowed to remain five or six minutes, before it is withdrawn." It is rarely necessary, our author observes, to introduce more than one needle.

By the Asiatics, acupuncturation is confined almost entirely to the diseases of the abdominal cavity, such as colic, tympany, &c. The Indians apply it much more extensively. "They puncture the head in all cases of cephalalgia, in comatose affections, ophthalmia, &c. They puncture the chest, back, and abdomen, not only to relieve pain of those parts, but as a cure for dysentery, anorexia, hysteria, colera morbus, iliac passion, &c. Local diseases of the muscular and fibrous structures of the body, also often afford them occasions for its performance, *and it is for diseases of this class only, that I have hitherto practiced it, and for which I would expressly recommend it.*" It does not appear, however, that this operation is calculated to do any good in diseases of an inflammatory character. It would seem to be particularly applicable for the removal of painful affections of a rheumatic character, unattended either with any obvious local inflammation, or great general excitement of the vascular system. "This circumstance," says our author, "must be ever in view, and if it be not fully impressed on the mind, I doubt not, that many who may be induced to try the effect of the operation, may be disappointed in it, viz: *That acupuncturation does no good, nor does it produce even a temporary alleviation, when the disease for which it is used is of an inflammatory character.*"

We will now extract some of the cases given in this work, which will convey a better idea of the nature and consequences of the operation, than any general descriptions.

The following cases are reported, among others of a similar kind, by Mr. Haime, in the *Journal Universel des Sciences Medicales*.

"Antoinette Boulard, 38 years of age, had experienced, in April 1818, a severe attack of rheumatism, which fixed on the inferior part of the left side of the chest; it gave way in 48 hours to the use of some sedatives, the tepid bath, and the application of a blister to the part in pain.

"Six weeks afterwards I was called to see this woman, who had fallen again into the same state. I found her with the trunk in a state of inability of action, the motion of the respiratory muscles extremely difficult, and the plaintive tone of voice indicated the violence of the pain, which drew from her cries on the least motion. The pulse was small and concentrated, but without sensible acceleration; the body was covered with cold sweats; and the unhappy patient, altogether, was in a state of inexpressible anguish. I thought it right to have recourse to the same remedies which had been successful on former occasions; but my hopes were deceived. Three days were passed in this state, and Antoinette obtained no relief: I determined, therefore, to practice acupuncturation. I in-

roduced a needle* at the inferior margin of the cartilages of the false ribs. The instrument had hardly passed the depth of a few lines, when the patient said the pain had changed its seat, and was descended into the abdomen, at the same time that it had lost much of its violence. I continued the introduction to the depth of an inch; by this means the pain was driven from the abdomen, and permitted the patient to breathe freely: however, I maintained the needle in its place for five minutes, and then made a second puncture, and successively a third, in the place where the disease had taken refuge. This third puncture made the pain totally disappear, and the patient cried out that I had restored her to life. Sleep of eight hours duration, and a state of perfect calmness, succeeded this operation.

"However, Antoinette sent for me on the following day, saying her sufferings had returned, but with less violence, and entreated me with much earnestness that I would repeat the operation, 'seeing,' she said, 'that it was only the sound,' (for so she named the needle) 'which gave her relief.' The operation was this time still more successful. The treatment was now continued for four days, and the last puncture so entirely relieved the pain, that it has not since returned."

"A woman had suffered for several days with wandering rheumatic pains, which continued daily to increase in violence; there were, however, at all times, fixed pains in the shoulder and in the right arm, which required such a degree of intensity by intervals, that the patient could not refrain from crying out. She was in this state when she came to consult me: finding, however, neither alteration in the pulse, nor increase of heat, nor redness of the skin, nor tension, nor swelling in the part affected, I considered the case to be simple rheumatism, and passed the needle to the middle of the arm, between the fibres of the triceps brachialis muscle; the place designated by the patient as the seat of the pain. The pain was driven into the fore-arm, and the second puncture caused it to descend into the hand, and a third being made in this part, caused it totally to disappear, and the patient said with delight and astonishment, she was cured; and was so satisfied with this treatment, that she spoke of it to every body."

The following cases are given as having occurred in our author's own practice.

GEORGE M'LAUGHLIN, about 30 years of age, a bricklayer by employment, came to my house in November last, supporting himself by a stick in one hand, and resting the other against the wall, as he proceeded. The body was bent at nearly right angles with

* Une Aiguille d'Acier, conique, aigue, longue d'environ trois pouces, et garnie de cire d'Espagne vers son œil, pour tenir lieu de tête.

the thighs, and his countenance indicated acute suffering. He had been attacked, he said, three days before, with darting excruciating pains in the loins and hips; every motion of the body produced an acute spasmodic pain, resembling an electric shock; and the attempt to raise the body to an upright position was attended by such insupportable agony, as obliged him to continue in this state of flexion rather than encounter it by altering his position. There was no more constitutional disturbance than was to be expected from three days and nights of constant pain; the pulse was a little quickened, and the tongue white, but I attributed this derangement to the irritation set up by the pain and loss of rest. I directed him to place himself across a chair for support during the operation, and I immediately introduced a needle of an inch and a half in length into the lumbar mass on the right side of the spine; in two minutes time I observed that he seemed to rest the weight of his body more on his limbs, and in the next instant, without any inquiry being made, he observed, that he felt his limbs stronger from the 'pain having left his hips.' He next plainly indicated that the pain was lessened, by raising his body; from which he only desisted, by being desired to remain at rest, through fear of the needle being broken. The instrument having remained in its place about six minutes, the patient declared he felt no pain, and could, if he were permitted, raise himself upright; it was then withdrawn; the man arose, adjusted his dress, expressed his astonishment and delight at the sudden removal of his disease, and having made the most grateful acknowledgements, left the house with a facility as though he had never been afflicted. The relief was no doubt permanent, as he did not return, which he would most probably have done, had he suffered a relapse.

WILLIAM MORGAN, a young man in the employment of a timber merchant, felt a violent pain suddenly attack the loins whilst in the act of lifting a very heavy piece of mahogany. The weight fell from his hands, and he found he was incapable of raising himself. He was immediately cupped and blistered on the part; but two days had passed and he was still labouring under considerable pain, augmented violently by every motion of the body. On the third day the operation of acupuncture* was performed upon the part of the loins pointed out as the seat of the injury, which, as in the former case, dissipated the pains in five or six minutes, and restored the motions of the back. He returned, however, the next day, with the same symptoms as at first, but in a mitigated degree. A needle was now passed to the depth of an inch on each side of the spine, which, as I expected, terminated the disease in a few minutes, and it was with pleasure that I understood the next morning, that the man had gone to his usual employment.

* By a needle of an inch and a half in length.

This case illustrates the observations of the French physicians before cited, as to the efficacy of the remedy in injuries of this description: it is true, that in my own practice, it is a solitary example; but so decisive was the benefit derived from it, that the case proves a powerful corroboration of both Mr. Berlioz's theory and practice.

HANNAH HOWARD, (a female servant in my house) aged 25 years, became in September last the subject of rheumatism. The shoulders, arms, back, and hips, were the parts selected by the disease for its wandering peregrinations. Antimonials, opium, guaiacum, hyosciamus, &c. relieved her occasionally, but at the end of three months, metastasis to the heart suddenly took place. I was called hastily to her at this time; she had fainted, and when recovered from the syncope, complained of violent pain about the region of the heart, which she informed me had troubled her more or less for several hours. Her pulse was hard, and beat somewhat about 106 in a minute; but from its extreme irregularity, it could not be measured with exactness; nor if it might, would it have been found, I believe, to have preserved an uniformity within any two given periods; as both its intermissions and its actions of rapid velocity were produced at uncertain and variable intervals. Copious bleeding, blistering, cupping, with the use of digitalis and colchicum, at length removed the disease; and in three weeks she was able to leave London, to try the effect of country air in restoring her health and strength. She returned to town after a short time, perfectly recovered; and continued so, until an exposure to wet brought on another attack of rheumatism; which, after variously shifting its seat for several days, now fixed itself on the left side. The remedies which had formerly been of service, were now taken without relief; and the colchicum* (which, in most cases of rheumatism will be found, after bleeding, more valuable than any other article of the materia medica) was totally inert. The pain had now acquired such a degree of violence, that the slightest motion of the body gave the most exquisite agony; and so intense was this state of suffering, that the patient could not be urged to speak in a tone loud enough to be conveniently heard, through the fear of exciting an exacerbation of pain, which even such light motions occasioned. I now had recourse to acupuncture; having introduced a needle through the integuments covering the interstice of the 8th and 9th ribs, at the part corresponding to the junction, with their cartilaginous epiphyses. I continued to press it gently forward, by rolling it freely between my fingers. When it had penetrated to about

* I have every reason to believe, the wine impregnated with this plant, is of the most medicinal value, when the infusion has been made with the seeds, rather than the roots, as lately recommended by Dr. Williams, of Ipswich. It is the preparation which I have found most beneficial, and upon which I could place the greatest reliance.

two-thirds its whole depth, (an inch) I inquired if she experienced either pain from the puncture, or relief from the disease; she replied, "she scarcely felt the instrument, but that her rheumatism had suddenly abated of its violence;" and to my surprise, this reply was expressed in her natural tone of voice. She added, "that she could now speak and breathe freely," so that I now found her former taciturnity, which I had attributed to moroseness, was banished. I continued the introduction of the needle, and in a few minutes the disease was dislodged, and fled to the back of the chest, near the angle of the ribs. The motions of the shoulder were now restored to their utmost freedom, and I withdrew the needle, and inserted it into the part which had now become the seat of the pain, about two inches from the spinal column. The disease soon began to dissipate itself totally; the patient said she was free from uneasiness, and could make a deep inspiration without pain. The instrument having been retained in its place five or six minutes, was withdrawn; the chest had regained its full liberty of action, and the utmost variety of flexion of the body could be used, not the slightest inconvenience ensuing. The next day, however, the pain again visited the anterior part of the chest, and I again had recourse to the needle. The operation was completely successful; for, excepting a slight darting pain, which occasionally troubled her for a few days afterwards, no symptoms of the disorder remained, and she continues at this time to attend to the duties of her station in my family.

Whilst occupied with the preceding pages, I received the following communication from my friend, Mr. Jukes; which I subjoin, as the strongest corroborative evidence of the efficacy of the practice under our consideration.

"Great Peter-Street, Westminster, Feb. 27, 1821.

MY DEAR SIR,

"In compliance with your request, I send you an account of the effect of acupuncture on our friend Mr. Scott.* I received an urgent message on the morning of the 18th inst. from that gentleman, requesting I would visit him instantly. I found him in bed; and, with a countenance expressive of much anguish, he informed me, that for three days he had been suffering severely from pain in the loins, which he attributed to leaving a warm room during one of the late foggy nights. Within the last 12 hours it had acquired such a degree of violence, that even respiration was insupportable, except the body were fixed in such positions as permitted the least possible motion. An attempt to resume the erect posture, produced violent spasmodic action of the muscles of the back, which appeared to be communicated by sympathy to those of the abdomen and chest, impeding respiration with a convulsive effort;

* Mr. Scott first introduced the operation into England.

nor could any motion of the body be made without producing this distressing effect. Neither fever nor general derangement was present; the secreting organs of the body properly performing their functions, proved the external locality of the disease. In this state of things, acupuncture produced itself to us as likely to afford relief, and it was, therefore, immediately resorted to.

"I applied an exhausted cupping glass upon the integuments, opposite to the second lumbar vertebra, and midway between this bone and the edge of the latissimus dorsi muscle, which was the part referred to as the most concentrated spot of the disease. As soon as a needle had penetrated to the depth of an inch, a sensation arose, apparently from the point of the instrument, which the patient described as resembling that which is produced by the passage of the electric aura, when elicited to a metallic point, diffusing itself at first to some distance around the part, and then extending itself up the side to the axilla. This sensation continued to be felt for the space of a minute, when a violent pain struck into the right iliac region, immediately above, and corresponding with the line of the crista of the ilium. No pain was now felt in the back, except a dull aching of about two inches in breadth, on the right side of the spine, extending from the lower part of the neck to the sacrum; corresponding with the situation and course of the longissimus dorsi muscle. The pain above the hip now began to subside, and in the space of three minutes from its commencement, had ceased altogether.

"The uneasiness along the course of the spine still remaining, a needle was introduced about an inch from one of the upper dorsal vertebræ. The pain in the right side was in a few minutes entirely dissipated, and the patient arose, declaring, that, except a slight degree of uneasiness on the posterior part of the chest, near the angles of the inferior ribs, he was completely relieved from the disease. He, however, requested I would pass a needle in this last situation; on effecting which, the pain soon left its last refuge, and the patient dressed himself, and left his house in the most perfect health. I have this day seen him, and he assures me, that he has not experienced any return of the affection."

E.

ART. XVIII.—*Remarks on a Paper entitled "Reflections on the Treatment of Fracture of the Thigh, with an account of a new Apparatus." By WILLIAM GIBSON, M. D. Professor of Surgery in the University of Pennsylvania.***

THAT considerable difficulty is experienced by surgeons in the management of oblique fractures of the thigh, has often been acknowledged; and that patients are sometimes dismissed with shortened limbs and other less serious inconveniencies, we are not disposed to deny. Had Dr. Gibson been content with fairly stating these circumstances, and with simply describing the utility and method of applying his new apparatus, he would certainly have escaped our censure, if he could not have merited applause. But, unfortunately, it has happened, that in his paper every inconvenience of the common methods of treatment is generally exaggerated, and that very unfair statements respecting the apparatus of Bell, of Cooper, and of his own new modification of Hagedorn are detailed. As this article, in common with many others in the Philadelphia Journal of Medical Science has been honoured with a highly complimentary review in the columns of the National Gazette, the general public has become interested; but from motives of delicacy we shall confine our remarks to professional readers. Our author's habit of voluminous writing having extended the uninteresting details of his subject to the painful length of twenty-two closely printed pages, necessarily prevents us from entering into a minute examination of all his positions. We have already, however, from a very cursory perusal, detected so many unfortunate mistakes in the doctor's notions, that it has become quite disagreeable to pronounce our opinion of his performance. But we shall be wanting in our duty if we suffer any thing which has not the strict sanction of truth, to be imposed upon our readers. However unpleasant, therefore, the task of correcting one of the most elevated among our brethren may prove, we must undertake to hold up the standard of good doctrine to the profession.

After a sufficiently long exordium, our author commences his

* See No. 6, Philad. Jour. Med. and Phys. Sciences.

subject in earnest, by detailing the apparatus of Dessault, together with its application, almost in the very words of its inventor. He goes on to describe its manifold and frightful disadvantages in the following paragraph. "The surgeon draws down the foot and leg, coaptates the broken extremities of bone, places the limb in its natural position, fastens his extending and counter-extending bands, and preserves, as he imagines, the limb of its natural length. But are his views actually accomplished? Can he exert sufficient force to overcome the resistance of the muscles, and prevent the retraction of the bone? or if he actually accomplished this for a limited time, do not his bands speedily yield, become elongated and twisted like a rope, and by being relaxed, permit the muscles again to act, and the bones to resume their unnatural position? Again, admitting the texture of the bands to be such as not to suffer extension, are the soft parts covering the ischium and ankle, (the principal points of action), incompressible? On the contrary, is not the principal pressure, especially in fat subjects, sustained by them, and what is the inevitable result of this pressure, if rigorously kept up? *ulceration*, and perhaps *sloughing*. These are difficulties which every candid man, who has had much experience in the treatment of a fractured thigh, will acknowledge to exist, which Dessault himself, in part, acknowledged, and which every one who pays the slightest attention to the subject, will find to be strictly true." Page 218, 19.

These difficulties, however, the doctor has forgotten to mention, are attendant only upon very careless and inattentive practice. Dessault ascribed them to that cause, and not a single writer before Dr. Gibson has hesitated to adopt the same opinion. The same illustrious surgeon, on the very page from which our author concluded, that he, "in part, acknowledged" this extravagant account of difficulties, gives clear and concise directions for avoiding them. By following these directions every good practitioner has been enabled to manage broken thighs with perfect success, in a great majority of cases, without encountering any of the horrid calamities so carefully enumerated by our author. But Dr. Gibson says, "so far as my own experience goes, (which amounts to "upwards of twelve years, during the greater part of which time I "had the chief control of the surgical cases of a large hospital "and alms-house, together with an extensive private practice,) I "am ready to declare, that I have never met with a single instance

“ of oblique fracture of the thigh bone, in which I have used the
“ apparatus of Dessault, (and until the last six months, I have never
“ used any other,) that more or less ulceration of the perineum and
“ foot, and shortening of the limb, were not the consequence.” Now
all this, we readily admit, is very candid ; but we are afraid that
Dr. Gibson could not have been aware of all the conclusions which
his readers may draw from his confession. Other surgeons have
not proved so unfortunate in their practice ; at least, so far as our
knowledge extends, but a very small number of such accidents
have been witnessed. Dr. Dorsey, who was never known wilfully
to misrepresent any circumstance, states in his *Elements of Sur-*
gery, “ that although volumes have been written on the action of
muscles in occasioning derangements of the fragments, it is a
certain truth, which has been too much overlooked by all writers,
that the muscles very speedily accommodate themselves *to any pos-*
ture, &c.” Again “ by the use of this apparatus (Dessault’s) there
“ can be no doubt that permanent extension of the thigh bone, not-
“ withstanding the cavils of Mr. J. Bell,” (of whom, by the way, Dr.
Gibson here appears a humble copyist,) “ may be kept up, and
“ that a perfect cure may in most cases be effected, without the
“ slightest evident deformity, or shortening of the limb. I have for
“ twelve or fourteen years witnessed the effect of this mode of treat-
“ ment in the Pennsylvania Hospital, where more accidents are ad-
“ mitted than in any other institution in America ; and I am safe in
“ asserting, that the success of the practice has been surpassed by
“ that of no other hospital in the world. I have never seen a crook-
“ ed limb, or a shortened limb, the consequence of a simple fracture
“ of the thigh, unattended by comminution, where Dessault’s appa-
“ ratus, modified as above, has been fairly applied.” Our own ex-
perience corroborates this statement of the late Dr. Dorsey ; and
we are informed that the same practice in the Pennsylvania Hos-
pital continues to be successful, if not altogether unobjectionable.
In fact, the rudest surgeons in the country are in the habit of pro-
ducing satisfactory cures of very oblique fractures of the thigh by
this apparatus ; and, until our professor shall be able to detail a
more successful experience than his candid avowal discloses, we
fear they will prove quite obstinate in their attachment to the good
old method. Some of the readers of the *Philadelphia Journal* may
be led to infer, from the doctor’s confession, that he is either a very
careless or inexperienced practitioner ; while others, perhaps the majority,

will feel inclined to suppose that, although a very learned writer and extraordinary operator, he must have been physically disqualified for the management of broken bones. We, however, are disposed to exercise a more charitable opinion concerning the matter; and do verily believe, that either in the zeal of his argument he overlooked the more trifling consequences of his open-hearted disclosure, or from his natural modesty of disposition, he was ashamed to speak in boastful terms of his own experience.

In page 219, we observe the following passages: "But are these the only objections? Has it not been proved, by experience, that the perineal band, from its transverse action on the thigh, has a tendency to throw the superior fragment of bone outwards? Again, does not the extending band, owing to the obliquity of its action, force the foot preternaturally outwards?" Although Dr. Physick is immediately afterwards highly complimented for his method of avoiding the last, which is certainly the least important of the two objections, no notice is taken of a most effective remedy for the first mentioned inconvenience. If the perineal band always had "a tendency to throw the superior fragment of bone outwards," it would prove impossible to succeed, in most cases of fractured femur, by Dessault's apparatus; but the truth is, no such tendency operates, except in fractures of that part of the bone which is immediately in the vicinity of its head or cervix. The pressure of the external splint would counteract such a disposition, if it ever occurred in a fracture below the trochanters; and the ingenious contrivance of Dr. Hartshorne obviates every danger of producing it in cases of fracture above those processes. That excellent surgeon, some years ago, discovered the utility of making both extension, and counter-extension, upon the *internal* splint, which, by the pressure of its upper padded extremity upon the tuberosity of the ischium, removes all necessity for resorting to our author's much deprecated "perineal band." This apparatus has since been generally employed in the Pennsylvania Hospital, and Philadelphia Alms-house; and almost every practitioner in the city has had occasion, more or less frequently, to witness its advantages. Yet, Dr. Gibson, in a sly little note on the opposite page, asserts, that he has "*not seen the splints of Dessault, as modified by Dr. Hartshorne!*" Now, we are really afraid that the students of the alms-house and hospital, will suppose our professor

of surgery must have been blind, when, in his visits to those institutions, he overlooked the huge pile of Dr. Hartshorne's splints, which graces the corners of some of their wards.

After giving a long detail of the frightful horrors of Mr. Pott's semiflexed posture, our author says—"On the contrary, the extended position, even from the first, is attended with no great inconvenience, and finally is found so free from pain, that there is reason to believe the patient *would not voluntarily change it, if permitted so to do*"—a singular offset, certainly, to the sad account he had before given of the inconveniences of the same extended posture. But all this is easily reconciled, when we recollect the awkward dilemma in which the doctor happens to be placed. It was necessary that he should condemn and overturn, as completely as possible, all the old methods, before he could venture to introduce his own new apparatus; but, unfortunately, it turns out that the same prostrate attitude of Dessault must, after all, be resorted to and commended.

We have thus far been able to exhibit some lenity of disposition in our criticizing labour; in examining the representation, however, which Dr. Gibson has made of the apparatus of Cooper and of Bell, we can hardly promise to continue so good-natured. After detailing the contrivances of Mr. White, of Manchester, and of Mr. James, of Hoddeson, almost verbatim, in the language of Mr. Astley Cooper, he continues—"It will be easy to perceive the manner in which any apparatus, thus constructed, acts. The patient, laid on his back, has the limb placed over the inclined boards at an angle, corresponding with an easy and relaxed flexion. Cushions are placed beneath, to obviate undue pressure, and splints secured to the limb, to afford lateral pressure." So far, this statement is sufficiently accurate, but he goes on to say, "*the weight of the body hanging by, and operating upon the superior fragment, &c.*" "Let any one, for the sake of experiment, place beneath his own sound thigh and leg, the machine of James or Bell, so as to have the *leg secured on one side, the thigh on the other, and the body suspended and supported by the thigh*. He will then find, be the cushions ever so soft, that the position is by no means so comfortable a one as he might be led to imagine; that the calf of the leg must be firmly and painfully pressed against the flat surface of the inclined boards, that the same sustains not only the whole weight of the thigh, but that portion of the body elevated above the plane on

which it would naturally rest, &c." "If he finds this attitude painful, and with difficulty borne for any length of time by a sound limb, how injurious, will he conclude, must be the effect produced upon an inflamed and broken thigh, when similarly circumstanced?"—"It is extremely doubtful, whether the patient can sustain the torture necessary to carry the operation into full effect." "Take off from the ham the degree of pressure necessary to relieve the patient, *the body sinks and is supported by the bed*, counter-extension is, therefore, removed, extension is destroyed, &c." From these quotations, it plainly appears that our author was determined to represent the London practice as absurd and contemptible, in order, perhaps, that his own "new apparatus" might receive all the benefit of an undivided applause. He has even neglected to avoid the imputation of downright plagiarism, in borrowing almost the very words of Mr. John Bell, where that vehement writer declaims against French surgery. But all this we could have tolerated, had there appeared any justice in the history which he gives of the action of Mr. Cooper's contrivance upon the unfortunate sound-legged wight, who is supposed to have undergone its operation. To hang up an uninjured extremity over a triangular piece of timber-work, and to leave the body suspended by it, with the pelvis wriggling in the air, would, no doubt, prove a very inconvenient attitude; and probably, Mr. Cooper himself would find it not a little difficult to persuade his refractory London patients to undergo such tribulation. When we come to examine the essays, however, which our author quotes for his information upon the subject, we find no such representation authorized. The triangular frame is employed by Mr. Cooper, solely for the purpose of maintaining the injured extremity in a gently flexed and elevated posture; while the pelvis, together with the trunk, is allowed to rest quietly upon the subjacent mattress. "The patient is to be placed upon a mattress, *on his back*; the thigh is to be brought over a double inclined plane, composed of three boards; one below, which is to reach from the tuberosity of the ischium to the patient's heel, and the two others above, have a joint in the middle, by which the knee may be raised or depressed; over these a pillow is thrown, to place the patient in as easy a position as possible. When the limb has been thus extended, a long splint is to be placed upon the outer side of the thigh, &c." This description is illustrated by a plate, which represents the patient lying flat on his back and hips, with the extremity alone elevated

upon the frame. Mr. C. adds, in a note, "I have now been in the habit, for near twenty years, of employing this instrument in fractures of the thigh bone, and also of recommending it in my lectures, and do firmly believe, that it will be found the best means of keeping the limb constantly extended, and preventing that contraction of the muscles which is so apt to occasion deformity. When the thigh and leg are placed upon the machine, the patient *rests upon his back*, the knee is slightly bent, the foot rests upon the heel, and the position is one of great ease to the patient."

Cooper and Travers' Essays, p 261.

From these sentences, one would think it almost impossible to mistake the meaning of the author; and Mr. Charles Bell is equally explicit in his description of a similar machine, for the management of fractured thighs. "To ease the muscles of the thigh, we must raise the hip by placing a thin cushion under it." *Operative Surgery*, vol. 2, p. 347. On the opposite page, a wood-cut of the apparatus applied upon a patient, is figured; in which a pillow is actually represented under the pelvis, for the purpose of supporting the hips.

Now we do not wish to be severe in commenting upon these mistakes of our author; indeed, we should have felt inclined to pass them over as mere accidents, had we not been informed of a very extraordinary demonstration given to the surgical class last winter, in the university of Pennsylvania. A poor man from the alms-house, is said to have been strung up by one of his inferior extremities over a double inclined plane, so that his hips dangled in the air some inches above the level of his shoulders—and this was demonstrated by the professor of surgery, as an exemplification of Mr. Astley Cooper's treatment!! *Doli, machinæ, fallaciæ, præstigiæ, sine ratione esse non possunt.*

In page 225 of the Philadelphia Journal, our author has indulged his pique against British science, in the following terms: "It is well known that the English surgeons, from time immemorial, have been grossly deficient in the application of bandages, and the management of fractures and dislocations." Here we cannot help thinking, that the doctor must either have forgotten his own bad success, or his more fortunate experience must have been misrepresented by his modest confession.

Dr. Gibson's "new apparatus" is very easily described. It consists of two long splints, extending from each axilla, where their crutch-like upper extremities terminate, to some distance below

the feet. The lower extremities of these splints are connected by a cross board, to which both feet are fastened by straps and gaiters. A splint cloth, like the one used in Dessault's apparatus, and some chaff bags, to fill up the inequalities of the limbs, complete the machinery. The advantages anticipated from this contrivance, are deduced from the circumstances, that counter-extension is made upon the sound limb by bracing it upwards against the pelvis, and that the chest and shoulders are fixed by the pressure of the crutches in each axilla. But it may be observed, that a confinement of the chest does not necessarily prevent all motion in the pelvis; and that by bracing up the sound thigh, the adjoining hip is disposed to ascend, which tendency is not counteracted by any opposition to the descent of the other side of the pelvis. By confining a pair of sound limbs in Dr. G.'s machine, we grant that one hip cannot rise above the line of its fellow, for the obvious reason that both sides are equally braced up by the resisting femoral bones. But the case becomes very different when one thigh is broken: the machine then affords but little resistance to a descent of the injured side; the upward pressure of the sound limb tilts the opposite hip downwards, and the superior fragment of the femur is easily pushed below its natural situation. The apparatus of Dessault appears to be much better calculated to prevent this derangement, because it acts more immediately upon the injured parts, and binds both portions of bone to one unyielding splint. But we will not decide positively respecting the merits of Dr. Gibson's invention until we have an opportunity of testing it by experiment. The only trial which the doctor himself has given it, appears to be confined to one solitary case; and he certainly deserves the credit of having drawn some bold conclusions from so limited an experience. Indeed, our author must have been aware of this, when in concluding his essay, he observed, "let it be remembered, that it is the peculiar privilege of genius, to accomplish ends without advantages, and to overcome difficulties insurmountable to ordinary minds."

Our readers have not been much acquainted with the name of Hagedorn, from whose contrivance Dr. Gibson confesses that he derived his "new apparatus." He is to us a "*novus homo*;" and, most probably, his method was only published as a mere suggestion—at least, Mr. Samuel Cooper does not mention that it was ever put in operation, although, from speculative views, he com-

mends it very highly. Whatever facts, therefore, the professor of surgery may have communicated, will, no doubt, prove extremely interesting; and, to give our readers an opportunity of making up their own opinions, we will transcribe very freely from the account of his experiment.

"It happened," says Dr. Gibson, "about the time I first read the account of Hagedorn's apparatus, as detailed by Cooper, I attended with my friend Dr. Dewees, a gentleman of this city, who, in walking through an entry in the dark, fell and fractured the right femur obliquely about its middle, and also the left humerus in a similar manner, just below its neck." The professor declares that he first applied the apparatus of Dessault in this case, but, according to his former unfortunate experience, he soon found that altogether unsuccessful, and next resorted to the method of Hagedorn. He soon found, however, that simple and ingenious as it was, and calculated to effect extension and counter-extension to a much greater degree than that of Dessault, that it was still imperfect, but susceptible of such changes, as would make it a valuable acquisition." "It then occurred to me, if I construct two splints, each padded or stuffed like the head of a crutch, and long enough to reach from the arm-pit to the foot, and secure these by circular bandages around the body and limbs, and by a foot-board, the necessary support must be given; the pelvis cannot incline, and the broken limb must remain of its natural length. The experiment was tried, and with the happiest effect; notwithstanding the splint could not be carried, owing to the broken arm, so high as could have been wished. Convinced of the utility, then, of the principles originally suggested by Brunninghausen, and of the efficacy of the particular apparatus I have contrived as an improvement on that of Hagedorn, I submit a detailed account of its construction and mode of application." P. 230-31.

We believe we do not misunderstand our author when we infer that he here wishes to convey the idea that his experiment proved perfectly successful; and that, in conjunction with his friend Dr. Dewees, he completely cured the patient of two broken limbs by his new apparatus. This being admitted,—and if language ever conveys any positive meaning, Dr. Gibson's readers cannot arrive at an opposite conclusion,—we have next to perform the most unpleasant part of our duty. To convict a respectable man of im-

proper conduct, is certainly no agreeable task at any time : but in our profession, above all others, truth ought most to be valued. Upon the recollection of accredited facts, the fate of lives often depends ; and generally, in proportion to the certainty of our knowledge, is the usefulness of our art extended. Whenever, therefore, we find an influential writer offering misrepresentations of any circumstance which may endanger the welfare of our fellow men, we shall esteem it our most imperious duty to expose his transgression.

Mr. Charles Foulke, a respectable hard-ware merchant in Market street, just below Fourth street, on walking through a dark entry about seventh months ago, accidentally caught his foot in the carpet, and was thrown violently on the floor. By the fall, his right thigh bone was broken obliquely near its middle, and his left humerus was also fractured just below its neck. Dr. Dewees, who is a distant connection of Mr. Foulke's, being the family physician, called in the professor of surgery, to take the management of the case. The method of Dessault was first resorted to, afterwards *the "new apparatus" of Dr Gibson was employed*, and finally, several other modes of treatment have been adopted, none of which, however, have been attended with any very *happy effect*, for the patient is still confined to his room with a shortened and deformed thigh. About two months ago, a short time after the publication of the essay under review, a highly respectable gentleman called upon Mr. Foulke, who had then become somewhat dissatisfied with his situation, and no little surprise was created by finding Dr. Gibson's very patient with his broken limb uncured, and mounted upon the much abused apparatus of Mr. Astley Cooper. No union of the broken femur had then taken place, and although Dr. Gibson had just published that his apparatus was attended "with the happiest effect," the sound limb was exceedingly painful, and swelled from its long imprisonment in the "new modification of Hagedorn." This statement we have received from the most unimpeachable authority. Although our author has withheld the name of the patient in the detail of his experiment, still, the coincidences between the two cases are too striking, to admit of any hesitation in deciding upon their identity.

In answering some anticipated objections to his apparatus, the professor afterwards inadvertently acknowledges that he made but

one experiment. "This I can only answer by stating that *in the case in which I employed the mode I have advised*, no such distress was occasioned, except for a very short period, notwithstanding the habit of the patient was gouty, and in other respects unfavourable." P. 237. What were the other unfavourable circumstances to which the doctor alludes, we have no positive means of determining; but in page 230, he makes use of the expression "owing to the obesity of the patient," to account for the failure of his first effort. Now Mr. Foulke has been for some years afflicted with the gout; and though not extremely bulky, his frame may well be denominated corpulent.

We wish as much as possible to avoid severity in our remarks; and we will not expatiate therefore upon these very disagreeable circumstances. If Dr. Gibson shall again undertake to invent a "new apparatus," we must solicit him to write with candour. Why his kind-hearted friend Dr. Dewees neglected to correct the unhappy mistake in the history of his only experiment, we have not been informed; but of the manner in which the columns of the National Gazette become crammed with partial medical reviews, we have a better understanding. Puffing has become almost a system in medicine, and every boasting doctor has some convenient friend to write his eulogy.

G. M^c

ART. XIX.—*Observations on "Thoughts on Sympathy, in a Letter from CHARLES CALDWELL, M. D. to N. CHAPMAN, M. D."**

"The flowing mane of the war-horse, or the gaudy plumage of the peacock's tail."
DR. CALDWELL.

"WITHOUT pretending then," says Dr. C., "to disclose a single view that shall, to you, be marked with novelty, either in matter or arrangement, suffer me to invite you to a simple retrospect of grounds we have so repeatedly traversed together. This trouble I venture to give you with the less ceremony, *in consideration of the efforts which appear to be on foot, in various quarters, to reinundate the medical world with the foul tide of humoral doctrines.*"

"Although not, *perhaps*, justified in saying that, in behalf of the sympathetic school, we have maintained the conflict entirely alone,

* No. 6, page 302, Philadelphia Journal of the Med. and Physical Sciences.

it is certainly true, that as teachers and disputants, we have, for many years, held our stations in the front rank of battle. Nor, *while supported by an ally so able in council, and so dextrous in combat as you are*, does any *apparent* augmentation of the forces of our opponents awaken in me the slightest apprehension or concern. However few in numbers they may originally be, the advocates of truth, and the faithful interpreters of nature, cannot fail, in the end, to triumph over legions entangled in error. For a time, indeed, the struggle may seem desperate and the issue doubtful. The 'million' may even exult in the anticipation of a certain, an easy, and a speedy victory. Like the small but invincible band of Byron's Conrad, the advocates of sound principles may be considered,

'Hemm'd in—cut off—cleft down—and trampled o'er.'

"But the fancy is illusive and the hope a bubble. Let them be true to their cause and to themselves; let their resolution be manly and their perseverance inflexible; let them, in the language of the same illustrious favourite of the muses,

'— each strike singly, silently, and home;'

and, instead of falling themselves, in *the deadly conflict*, it will be their antagonists that must

'— sink *outwearied* rather than o'ercome.'

There is, we confess, an appearance of much danger, in approaching a champion who thus valiantly proclaims his readiness to "*join the deadly conflict*" of medical polemics; and though

hemm'd in—cut off—cleft down and trampled o'er,

is resolved, "*while supported by an ally so able in council, and dextrous in combat*," as his friend Dr. Chapman,

to strike silently and home,

and to prostrate those Vandals of our science, who are wickedly engaged "*in various quarters to reinundate the medical world with the foul tide of humoral doctrines*."

This we aver, is portentous enough. It forebodes a deal of trouble to the unfortunate *humoralist* who may have sufficient courage to enter the lists against these "*faithful interpreters of nature*," fortified, as they are, by "*resolutions so manly*," and "*like the small but invincible band of Byron's Conrad*," animated with the certain hope of "*outwearying*" their antagonists.

Fancying, however, that we are about to meet a most brave and puissant champion; one who has long fought by the side of his

trusty and equally *brave* comrade "in the front rank of the battle" against the encroaching flood of pestiferous humoralism, we entertain a hope that, even though vanquished, we shall be entitled to some credit for the boldness and magnitude of our attempt. "*But the fancy may be illusive, and the hope a bubble,*" in which case, indeed, we shall not even enjoy this humble consolation. But to enter more immediately on our task.

"In my lectures and *teachings* on this subject," says Dr. C., "it is my custom to consider the human sympathies under the four following divisions, viz: 1. Mental sympathies, i. e. sympathies of mind with mind. 2. Corporeal sympathies, i. e. sympathies of one part of the body with the other. 3. Sympathies of the body with the mind. 4. Sympathies of the mind with the body.

"Through the medium of one or the other of these channels, or of two or more of them combined, may every movement, action, and process appertaining to him, (living man,) whether healthy or diseased, mental, corporeal, or mixed, be satisfactorily explained." We would not, for any consideration, say a word against the admirable simplicity of this philosophy. *Sympathy*, is the universal principle of intellectual and corporeal phenomena! Sympathy unravels the mysteries of mind and living matter. By sympathy we walk! By sympathy we talk! By sympathy we digest! By sympathy we stand! By sympathy we spit! By sympathy we blow our noses! By sympathy we cut our corns, and pick our teeth! By sympathy "the mighty musician maddened the spirit of the conqueror of the world, and hurried him along to the conflagration of Persepolis;" and by sympathy, or the force of genius, *turbine raptus ingenii*, our *magniloquent* author is hurried away into the empyrean regions of fancy, until obliged, by the force of gravity, to descend, *ab æthere summo*, to the terra firma of philosophy, and to announce the serious truth that "the comb and wattles of the domestic cock may be regarded as a production of the organs of generation!"

We beg the reader's pardon for this ambitious flight. If we can keep the motto which we have, perhaps, unluckily prefixed to these remarks out of our minds we shall, we hope, be able to stick to the *musa pedestris*; unless, indeed, some new game of *gaudy* plumage start up as we proceed and hurry us off, by sympathy of course, into the nebulous regions of *bombast*, or the foetid slush of *bathos*.

Resolved to sweep away every pretence for the humoral pathology, our author observes, that the orator and the accomplished dramatic performer exercise a powerful sway over human feelings and actions. Now mark what a "*home stroke*" he gives to *humoralism*. "Nothing," he says, "passes from the speaker to the hearer, *but the contagion of the soul*. The blood of the latter does not receive any admixture from the eloquence of the former!!" Nay more, he avers, "that the words of the orator strike the ear and electrify the heart," but—*mirabile dictu*—"have no affinity for the grossness of the humours!" It is in "the magical web of sympathy too," he says, "that poets drag our souls in triumph at the chariot wheels of their genius,"*—God forbid that we should be subjected to such an operation!—"And all this is effected, *not by any primary agency on the fluids*, but entirely through the medium of the intellect and the solids!!"

Now be it remembered, therefore, that neither the orator, nor the dramatist, nor "the chief at the head of his column," nor poets, "dragging souls at the *chariot wheels of their genius*;" nor "*mighty musicians*," nor any other great men, exercise their influence over mankind, "*by a primary agency on the fluids*," or by contaminating the blood, with any admixtures derived from these said causes. All this is exceedingly profound,† and may be regarded, as it appears to be intended, a most powerful argument against the *humoral* doctrines.

Here we must be permitted to philosophize a little ourselves; and we observe, therefore, that the word sympathy in a metaphysical sense, expresses a complex idea, including in its import, a communicating agent, and a recipient, but offering no explanation of the mode in which the former affects the latter. Thus although we say that we *sympathize* with a fellow-being, when we weep with him over his misfortunes, still we do not, nor can we by this expression communicate any idea of the train of intellectual motions that lead to the ultimate phenomena. We merely express by this

* This may be a very clever metaphor; but there appears to us something wicked and cruel in the deed, with which our author thus deliberately charges poets.

† We know nothing equal to this in profundity, except it be the celebrated aphorism of a learned professor, "that the *epigastric* artery is the medium through which the *faculty* as well as the *elements* of secretion are transferred to the womb!" *Exegi monumentum, &c.*

phraseology, that we experience similar emotions to those of the being whose happiness or distress we witness. When we look at a fellow-creature weeping, why do we feel an impulse to join in his sorrows? Is it explained by saying that we *sympathize* with him? By no means. We express thereby nothing more than a word, signifying that our own sorrow flows from that of another. If we wish to inquire more intimately into the connection between our own emotions, and those with whom we feel, we must resort to the principle of *association*; a principle, which, from the earliest dawn of intellect and feeling, "grows with our growth, and strengthens with our strength."

Smiling and joy, weeping and sorrow, with all the other emotions of the soul, and their external manifestations, are concatenated by the principle of association from the earliest periods of childhood. As we acquire experience in life, and feel more intensely its various and agitating emotions, we learn to repress, in some degree, their external expressions, but the tie which binds them together remains indissoluble. Hence, when we see a person weep, the idea of weeping which such a sight raises in our mind calls up the emotion of sorrow with which it is associated; and this complex operation we call *sympathy*. If there were such a principle as sympathy by which we could, as it were, catch the contagion of another's emotions, how comes it, that the parent of a youthful family feels more poignantly the agonizing pangs of the mother, bending and weeping over her dying infant, than he who has never known the anxious and tender cares of a father? It is *association* which brings home to the bosom the affliction of such bereavements. It is, in fact, to this principle that we owe our participation in the emotions and passions of our fellow-beings. But we have said enough on this point.

We shall now, therefore, pass on to our author's second class of sympathies, viz: *corporeal sympathies*.

The word sympathy, used in a physiological sense, expresses the fact, that an impression made on one part of the living system manifests itself by actions in other and remote parts. That such a power is essentially necessary to the preservation of the animal economy, is beyond a doubt. The living machine is a complex structure, consisting of a multiplicity of organs, each performing some function which has a bearing upon all the others, and without which the circle of vital phenomena would be incom-

plete, and therefore soon cease to revolve. That there may therefore exist this intimate harmony and correspondence between the various organs of the living body, there must be a connecting medium between them, capable, at once, of receiving and propagating impressions. The brain and its appendages constitute this connecting medium. By this pervading structure every part of the system is brought under the influence of the *sensorium commune*. An impression made on the nervous extremities of an organ, is immediately referred to this common centre of feeling; it here produces an excitement, which is reflected either upon the part in which the primary irritation exists, producing sensations in that part, or it is reflected upon other parts, exciting in them new motions and feelings. The organ to which such reflected excitement is conveyed is, perhaps, determined by the nature of the primary impression. Hence impressions made upon any part of the system may manifest themselves in other parts, through the medium of the brain, with which all the organs of the body hold an intimate correspondence, and by which they are enabled to co-operate in sustaining the phenomena of life.

That this arrangement in the living economy is intimately connected with the evolution both of morbid and healthy actions, no one can possibly doubt. The humoral pathology does not, nor ever did, deny the existence of *sympathies*, or more philosophically speaking, of a power in the living system to propagate actions from one organ, or part, to another. All that its advocates at the present day contend for, is, that diseases may arise, and be sustained by a peculiar or unhealthy condition of the blood. They view the animal system as a complex structure, consisting of solid and fluid parts, whose influence upon each other is constant and mutual, and whose individual integrity is equally essential to the support of the general fabric. They think it reasonable to conclude, from such a view, together with the positive evidence there exists of the admission of foreign substances into the circulation, that either part may become morbidly deranged, and mutually involve each other in disease.

We will now proceed to make a few more remarks upon our author's triumphant letter.

The reasoning, if it is not a solecism to call it reasoning, which he employs against the humoral doctrine, may be very convenient

for his purposes, but it is certainly very illogical. He enumerates a number of phenomena, evidently and indisputably produced without the agency of the fluids, and then concludes, that "*every* movement, action and process, of the living system, whether healthy or morbid, is equally independent of the condition of the blood!" We need scarcely say that this is a *non sequitur*. By the same dialectics we could very easily make it appear that our author is an exceedingly acute philosopher. We could adduce to this purpose, the many astonishingly profound remarks, which occur throughout his paper; as, for instance, that orators affect the imagination and rouse the passions by *sympathy*, and not "by *any primary agency on the fluids*"—that poets, "who drag souls at the chariot wheels of their genius," "musicians," and "military chiefs," exercise their sway without in any way affecting the blood, either by getting into the circulation in *propria forma*, or by any emanations which pass from them. He, moreover, evinces a most manly daring, in the following declaration: "Permit me to add," says he, "and to pledge myself to prove hereafter, the truth of the assertion, should any one call it in question, that many remedies, acting at a distance, cure complaints which they would render much worse, were they *applied immediately to the organ diseased*." Now, although old nurses, tyros in medicine, and other superficial persons, might readily assent to this proposition, since they might suppose, what, to be sure, is true enough, that the tartar emetic which cures an ophthalmia, by causing vomiting when taken internally, would aggravate the disease, if applied to the eye—or that the cream of tartar, which by purging cures a dropsy, would do harm by being introduced into the cavity of the abdomen, &c.; still, we do think that the author evinces prodigious sagacity in this observation, and we beg him to believe that we are "actuated by more than diplomatic sincerity," when we express our hope, that he may hereafter favour the public with a full demonstration of this novel and abstruse fact. We may also observe, that although these observations of our author go to show him to be a very profound philosopher, still, it would be hazardous, we think, to make a sweeping conclusion to this effect, since, however sagacious on this subject, he might, nevertheless, be quite the reverse on others. We are the more disposed to be cautious on this point, because we find him occasionally falling into unpleasant contradictions, *quandoque bonus dormi-*

tat Homerus. Thus, in the second page of his paper he tells us, that "by sympathy, may every movement, action, and process, appertaining to living man, whether healthy or diseased, mental, corporeal, or mixed, BE SATISFACTORILY EXPLAINED"—then, after enumerating a long list of phenomena, which he considers, of course, "*satisfactorily explained*" by *sympathy*, he comes, at last, to fix the value of such explanations, by making the confession, and, we hope, it is "with more than diplomatic sincerity," that "IN HONEST TRUTH WE KNOW NOTHING ABOUT IT," i. e. *sympathy*! We humbly conceive, however, that to say a phenomenon is "satisfactorily explained" by an abstract term of which, "in honest truth, we know nothing at all," is to make an assertion, bordering very closely on the ridiculous. We, however, would not be positive on this point; for, although it would puzzle common minds to explain any phenomenon "satisfactorily" by a term, to which we attach no definite idea, yet, as "it is the peculiar privilege of genius, to accomplish ends without *advantages*, and to overcome difficulties insurmountable to ordinary minds,"* we must leave this point to be settled by future ages.

Our author lays particular stress upon the effects which sudden change of temperature produces upon the health, as an illustration of the sympathies which subsist between the skin and the various internal organs of the body. "A sudden change" says he, "in the temperature of the atmosphere from heat to cold, produces on the skin a morbid irritation, but infuses nothing deleterious into the blood. The irritation constitutes the first link in the chain of diseased action, which extends by sympathy from solid to solid—from one organ or set of organs to another, until the whole system feels the derangement." What does all this amount to? to the very profound conclusion, that cold suddenly applied to the body, produces an effect, first on the skin, and consecutively on the other organs of the body. For, although he ascribes these effects to the agency of *sympathy*, yet, it must be observed, this term expresses nothing more than the existence of an action in one part, in consequence of a pre-existing action of another, without giving us the least idea of causation.

The sudden application of cold, has a manifold operation in its

* Dr. Gibson on Fractures of the Thigh.

first impressions on the system. It at once diminishes the velocity and volume of the cutaneous circulation, in consequence of which, the skin becomes pale, shrunk, and cold. As a natural and *necessary* result of this condition of the circulation on the surface, the blood retreats to the central vessels, and the greater portion of that excrementitious fluid which nature intends, and the welfare of the animal economy requires to be cast off, is retained in the system. Hence, there is both a superabundant, and a deteriorated blood forced upon the heart, which, acting upon it as a preternatural stimulus, brings on, sooner or later, reaction, or the stage of febrile excitement. But to proceed with our author.

“An affection strongly resembling mania,” says Dr. C., “has frequently arisen from the impression of the unbroken seeds of *datura stramonium* on the stomach, when *not the slightest change had been effected in them by that organ*. In these cases, the seeds *retain their natural appearance*, and their expulsion by puking or purging, is followed by an immediate cessation of the disease. Had the offending portion of them made their way into the fluids, this could not be the case.” By this he means to say, that as the seeds of *stramonium*, after having produced the peculiar affection which arises from their introduction into the stomach, are found, on expulsion, still to retain their *natural appearance*, they cannot have imparted any portion of their substance or active principle to the circulation. We have already given so many examples of profound observation from the paper before us, that we fear we shall be charged with unbecoming flattery, if we continue to indulge our vein in this way. The present specimen of sagacious remark is, however, so superlatively excellent, that we cannot help expressing our admiration of it, whatever may be the consequence. We are aware, however, that some cavillous persons may object that, notwithstanding the “*natural appearance of the seeds*,” their active principle might have been imparted to the fluids of the stomach, and thus, by absorption, gained admittance into the circulation. In confirmation of this knotty objection to the author’s argument, it might be urged, as an indisputable fact, that *stramonium seeds*, *cantharides*, and a multitude of other substances, impart all their active properties to alcohol, water, or any other menstruum into which they are put, without *suffering the slightest change in “their natural appearances.”* As to the assertion, that the expulsion of the *stramonium seeds* is followed by an *immediate* cessation of the disease which they occasion,

we beg leave to express our dissent. We have had an opportunity of seeing a child perfectly maniacal for three days, from the effect of this substance, although the most perfect vomiting and purging had been early and frequently produced. According to the experiments of Orfila, the active principle of the stramonium "is absorbed, carried into the circulation, and acts upon the nervous system, particularly the brain."

One of our author's *solid* arguments against the correctness of the humoral doctrine is, *that castration produces an alteration both in the physical powers and moral propensities of man!* We grant the premises, but deny the conclusion. For though it were uncontestedly proved, that all the consequences of castration are independent of the fluids, still, it could not militate effectively against the facts which go to demonstrate, that the blood is susceptible of morbid derangement, and consequent morbid impressions on the general system. It is, however, by no means ascertained that all the consequences of emasculation depend on sympathy. It is certain that in the eunuch the blood is not deprived of those elements, which, in the perfect male, go to the formation of the seminal fluid. Is it not highly probable, that the suppression, or rather the want of this secretion, gives a new character to the blood; and since this fluid permeates every fibre, and constitutes the sole material out of which every other portion of the system is constructed, is it not reasonable to suppose that it has some share at least, in the production of the circumstances in question? This opinion is strengthened by the consequences which supervene upon the suppression of other secretions. Thus a total secretion of urine proves speedily fatal. Persons affected in this manner invariably become comatose, and die apoplectic. In cases of this kind, the fluid in the ventricles of the brain has been found to have an urinous smell. That these consequences are the result of a contaminated blood irritating the brain, &c. is proved by the fact, that in cases of suppression of the secretion of urine in the kidneys, *where the fluid is vicariously secreted by other organs, no such symptoms arise.* In the first vol. of the "Transactions of the Association of the Fellows and Licentiates of the King and Queen's College of Physicians in Ireland," there is a case of this kind mentioned. This patient died of dropsy; and on dissection, it was found that *the ureters were entirely obliterated.* The patient had regularly discharged small portions of urine. Here,

therefore, the internal coat of the bladder, and the exhalents of the cellular tissue, vicariously performed the office of the kidneys, producing a small discharge of urine from the former, and a dropsical effusion into the cells of the latter. And hence, the blood being regularly freed from its urinous elements, notwithstanding the want of renal secretion, none of the symptoms which attend a total suppression of urine were noticed.

We are indebted to our author for the novel information that "the *occiput* of the stag is annually decorated by a magnificent pair of caducous horns." One should suppose that a person who appears to be so intimately acquainted with the distinctive characteristic of *sexes*, would be perfectly at home on the subject of *horns*. In this, however, we were mistaken; for this *ex-professor* of natural history, has violently transferred the horns of the stag from the *os frontis* to the *occiput*, a circumstance, which must for ever render him uneligible to hold a seat in the Phrenological Society of this city, whose worthy members would, no doubt, resist all attempts to transfer the honours of the *os frontis* to the *occiput*.

"If I rightly understand them," (humoralists) says our author, "their creed embraces a belief in the contamination of the blood in the production of certain diseases, and in the medication of that fluid in their cure." Yes, this is their creed; and we are the more firmly persuaded of its correctness, since we see it so feebly assailed by one who has long "fought in the front rank of battle" against its doctrines; and who has entered the field on the present occasion, with a flourish well calculated to excite the hopes and the fears of the adverse parties; but who, like the feeble Priam,

———*telum imbelle sine ictu,*
Conjecit.

"To sustain," says he, "their belief in the contamination of the blood in these complaints (small-pox, chicken-pox, syphilis, &c.) the humoralists must either demonstrate the existence of such contamination, or make it clearly appear that, by this assumption of it as a postulate, they can explain the various concomitant phenomena more satisfactorily than can be done on any other principle." The former it is, perhaps, impossible to do; *i. e.* "to demonstrate the existence of such contamination" to the senses. But this does not disprove the existence of "such contamination" of the blood any more than our inability to detect miasmata in the air can be taken as

a proof of the non-existence of atmospheric inquisition. The second dilemma which our author leaves us on this point is, however, less perplexing. There are, in fact, many "concomitant phenomena" of these diseases, which *cannot* be rationally explained except by admitting the agency of a contaminated blood. How can the small-pox or the venereal disease be communicated from the mother to the foetus in utero, unless it be through the medium of the blood? For several well authenticated cases of this kind, we must refer our readers to the paper on the *humoral pathology*, published in our last number. There being no continuous connection between the foetus and mother, we cannot comprehend how an action could be conveyed sympathetically from the one to the other. Besides, children have been born with the small-pox, by mothers who had had the disease previously, and who must have therefore been insusceptible to the peculiar impression of the variolous contagion, and consequently, incapable of communicating such an impression to the foetus in utero. We are, therefore, obliged to resort to the blood as the medium through which such infections are conveyed to the foetus; unless, indeed, we admit the superlatively ridiculous doctrine of *sympathy* between the blood and blood-vessels, so gravely announced by a late writer on the *modus operandi* of medicines.

With regard to the introduction of foreign substances into the circulation, the author makes the following brave declaration. "In opposition to all that has *yet* been said and written on the subject, I avow my *entire* conviction, that in the living and perfect blood, no remedy previously administered *in any way* has ever been found afloat in its *formal* state." Now, this is modest, and cannot fail to carry conviction to the mind of every one; for who is there, that would not at once give assent to the *opinion* of our author, when it is opposed to the *direct evidence* of Borrichius, Lister, Smith, Home, Magendie, Mayer, Gmelin, Tiedeman, and to the recent and very respectable evidence afforded by the experiments of Drs. Harlan, Lawrence, and Coates, of this city? From the interesting and well digested report which these gentlemen have just published of the results of their inquiry, we beg leave to extract the following observations, which we request our readers to place in opposition to the *opinion* of Dr. Caldwell, and then to decide upon the merits of this question.

After giving a tabular view of eight experiments on different living animals, they say : " from this table it appears in *positive evidence*, that camphor may, and does pass through the system of the blood-vessels." " In two experiments with assafœtida, this substance pervaded the whole system in a short time. We remarked that the smell of assafœtida predominated in the *mucous* surfaces, and that of alcohol in the serous." Having given another table of sixteen experiments, they observe : " It is impossible to look over the above table without being struck with the obvious manner in which they indicate the route by which the chemical substance experimented on (prussiate of potass) entered the circulation. In nearly every instance in *which it was found in the blood*, the contents of the thoracic duct, if examined, exhibited it in a much more obvious degree." One of our author's colleagues, DR. BROWN, professor of the theory and practice of medicine in the Transylvania university, witnessed some of these experiments ; and we know from conversation with him, that he was perfectly satisfied as to the accuracy of the experiments, and the conclusiveness of the evidence they afforded of the absorption of substances into the circulation in a formal state.

But we will trespass no longer on the patience of our readers, by extending our remarks on this rhetorico-medico-philosophical production ; and merely add, in conclusion, in the language of a recent American writer, that " in the republic of letters, where the only dominion which prevails is that of reason and argument, a perfect freedom of thinking is allowed ; and under the exercise of this undisputed right, error can calculate upon nothing but detection ; sophistry only upon having the veil of its fallacies removed ; while" absurdity and " imbecility can expect no quarter from the overpowering influence of ridicule and contempt."* E.

* Rev. Dr. Beasley.

ANALECTA.

On the Effects of Iodine, and the Precautions necessary to be adopted in its exhibition as a Remedy for Bronchocele.

WE think that an extract from a Memoir which M. Coindet has published on this subject, in the number of the Bibliothèque Universelle for February, may be read with interest. Of all the preparations of iodine, that of the hydriodate of potash with a superabundance of iodine is the most manageable, and the one which produces the fewest accidents. For its preparation, 36 grains of the hydriodate of potash, and 10 grains of iodine are dissolved in an ounce of distilled water. From 6 to 10 drops are at first prescribed three times a day, and the dose is increased or diminished according to the effects produced. M. Coindet is of opinion, that it is necessary to observe the time when the iodine is about to manifest its action, so as immediately to suspend its exhibition, and resume it eight or ten days afterwards, that is, at the moment when the action of that before administered must terminate; again to suspend it and resume it, in observing nearly the same rules as every prudent practitioner follows in the administration of mercury, rules which have not always been kept in view by those who have made use of iodine, and the neglect of which diminishes the success of the remedy.

The following are the alarming symptoms observed by the author:—Acceleration of pulse, palpitation, dry cough, watchfulness, marasmus, and prostration of strength; sometimes swelling of the legs, tremors, painful hardness of the bronchocele, diminution of the breasts, or a remarkable augmentation of appetite, supervene; and, he adds, that in almost all the instances which he has observed, to the number of five or six, a very rapid diminution, or a disappearance, more or less complete, has taken place during those symptoms, even in hard, bulky, and old bronchoceles. On some patients, the medicine acts almost immediately, while on others, no apparent effect is produced, even after they have taken it for several weeks in succession. An example of its quick action is related, which occurred in a man who had had an enormous bronchocele in the two lobes of the thyroid body for a long series of years. Its increase was progressive, and it was very hard to the touch; the patient complained of choking and oppression when he walked, stooped, or went up stairs, but in other respects he enjoyed good health. He took thirty drops of the medicine daily, but on the 5th day complained of an increase in the size of the bronchocele, aphony, and rather severe pains, which required the suspension of the iodine, and the repeated application of leeches and poultices to the part. In fifteen days he had recovered his former state, with the exception of hoarseness: the bronchocele was also considerably diminished and softened. Two months after the commencement of the treatment, the remedy having been again administered during four days, and again discontinued, the bronchocele was sufficiently diminished to free the patient from all inconvenience.

M. Coindet considers that the iodine is contra-indicated when the constitutions of patients are remarkably delicate, nervous, or weak. But he has seen its exhibition attended with admirable success when the precautions he recommends have been observed, and the patients were affected with no other complaint than bronchocele, but above all, when they were at an advanced period of life. The following is an example of its beneficial operation; it occurred in a woman, seventy-five years old, who was affected with pains in the head, a tendency to drowsiness, and so great a weakness and numbness of the right arm, that she thought she touched every thing through a glove. These symptoms increased as an immense bronchocele was developed in the right side of the thyroid body, as it were in an acute manner; for although it had commenced thirty years before, it had during three months been increased in bulk nearly as much as the size of the fist. It evidently interfered with the circu-

lation in the brain, and compressed the brachial plexus. By the employment of the oidine, the disease was arrested after a fortnight; in thirty days the bronchocele and bad symptoms were diminished. In a month afterwards the swellings, paralysis, and affection of the head were all entirely dissipated.

The credit of the remedy is supported by other authorities besides that of M. Coindet; and the name of Breschet is mentioned as having communicated the results of his practice on this point to the Société Médicale d'Emulation, coinciding with the above stated facts. *Quar. Jour. For. Med.* No. xi. p. 348.

In a second memoir,* Mr. C. expresses his conviction that the hydriodate of potash, used externally, will answer the object required; and in support of his doctrine, he relates some cases in which this preparation of iodine was used topically, with complete success, for the removal of bronchocele and scrofulous swellings.

Dr. C. directs a pomatum to be prepared for the above purpose, consisting of half a drachm of hydriodate of potash and one ounce and a half of purified hog's lard. Frictions are then made with a quantity of this preparation, of the size of a nutmeg, morning and evening, on the goître and indurated glands, whether scrofulous or situated on the breast. Occasionally, the frictions are to be practised in the course of the lymphatics, and continued till the pomatum is completely absorbed.

"Une dame âgée de 28 ans portoit depuis long-temps un goître volumineux dans le lobe droit, mais bien plus encore dans le lobe gauche du corps thyroïde. Il s'étoit considérablement accru il y a trois ans pendant une grossesse. Je jugeai que ce n'étoit qu'une augmentation de volume sans lésion organique. Ce goître altéroit la voix et gênoit la respiration. Après huit jours de frictions les tumeurs étoient sensiblement plus molles, la peau étoit devenue plus épaisse et plus lâche; après quinze jours la diminution étoit encore plus considérable; le goître étoit divisé en plusieurs petits lobules, très-distincts les uns des autres; au bout d'un mois il a entièrement disparu, la voix et la respiration sont redevenues naturelles, sans que la malade ait éprouvé aucun autre effet sensible de l'action de ce remède."

Twenty-two other patients, afflicted with the same malady, were treated much in a similar manner; one half of whom have been completely cured, and the remainder considerably relieved. Dr. Coindet observed, on these occasions, that the iodine, thus thrown into the system by absorption, produced exactly the same beneficial results, as when taken internally; and when no organic lesion is present, the disease of the lymphatic system seems to be acted upon by the iodine, applied externally, with an energy equal to that attributed to the internal remedy.

In none of the cases in which this application was used, did there appear any untoward effect, such as the iodine, taken internally, is known to have given rise to; though Dr. Coindet thought it necessary to use as much precaution as if he had administered the medicine internally. The author takes this opportunity of remarking, that many local auxiliaries should be resorted to in the case of goître, by which its removal or cure will be greatly accelerated: amongst these, he reckons leeches and emollient fomentations.

Dr. C. next tried the hydriodate of potash, as a topical application in scrofulous indurated glands; and the success he obtained was beyond his expectation. He, however, prefers, in such cases, the solution of what he calls the ioduretted hydriodate of potash, taken internally. The following indications of two successful cases will be read with interest:—

"Une jeune fille âgée de dix-sept ans portoit, depuis quinze mois, sous

* Bibliothèque Universelle des Sciences, Belles-Lettres, et Arts, vol. cxlv. No. 4.

l'angle de la mâchoire et le long du cou, des paquets de glandes scrophuleuses, dont une d'elles, la plus basse, restoit ulcérée. On avoit inutilement fait un grand nombre de remèdes ; je prescrivis une solution d'hydriodate de potasse ioduré ; dans l'espace de six semaines toutes les glandes se sont dissipées suivant la marche que je viens d'indiquer, excepté celle qui étoit ulcérée. Une fistule pénétrant dans son centre a nécessité d'un traitement chirurgical pour compléter la guérison. Une autre jeune fille âgée de quatorze ans portoit depuis six mois le long du cou un paquet de glandes engorgées ; on avoit utilement fait tous les remèdes généraux et locaux indiqués en pareil cas ; dans l'espace d'un mois l'usage de la solution d'hydriodate de potasse ioduré a suffi pour la guérir."

In some few instances the medicine, administered both internally and externally, seemed to fail.

It does certainly appear that iodine is a most powerful agent, and one which possesses a specific and stimulating power over the lymphatic system.—As such, it might perhaps be given alternately, or in combination with mercury. In enlargements of the ovaria, one would think it a useful remedy ; but care must be had not to administer it where fever is present, or during the period of excitement.

For the information of those who may feel disposed to give this remedy a trial, we have deemed it proper to subjoin a formula for the preparation of the hydriodate of potash, with which we have been favoured by Dr. Granville, who begs us to add, that this salt is found ready formed in the kelp for the preparation of soda.

"Make a solution of caustic potash, add a sufficient quantity of iodine, and shake the bottle well : the water is thus decomposed—iodic and hydriodic acid are formed, each of which combines with a portion of the potash,—the former giving rise to an iodate which is little soluble, and consequently is precipitated,—while the latter forms the hydriodate of which we are in search, and which is highly soluble. The liquid containing it, is then to be filtered, and the residue washed with alcohol, of the density of 0.82, so as to obtain another portion of the hydriodate—to be added to the former liquid, which may be set to crystallize. The salt is deliquescent, and has a slight yellowish tinge : it consists of 100 of hydriodic acid, and 37.426 of potash."

Thenard observes, that by the process of crystallization, as well as by desiccation, the hydriodate of potash is changed into an ioduret of potassium. If so, the salt employed by Coindet, must need become a hydriodate during its trituration with the hog's lard,—the hydrogen of which it attracts, to form hydriodic acid.

Med. Intel. No. xx. p. 366.

Inflammation of the Pericardium.

Dr. Knox has published several interesting cases of pericarditis, the first of which we extract, together with the accompanying observations.

CASE I.—M., aged 31. 15th.—Complains of severe and constant dyspnœa, with great oppression in the chest ; cough ; copious, bloody, and purulent expectoration ; also frequent vomiting of a very bitter and greenish-coloured substance. There is constant soreness in the site of the stomach and liver, but no acute pains. Sometimes, however, pains are felt at the top of the right shoulder. A slight hardness, and some tumefaction, may be felt in the epigastrium and the hypochondriac region. The emaciation and debility are considerable ; countenance of a yellowish tinge ; pulse quick, but irregular ; great thirst ; tongue yellow ; no stool for some days. The present attack commenced about three weeks ago, with aggravated dyspepsia, cough, and the spitting of blood ; as also with vomiting and severe headach.—Says that he has frequently had strong palpitations of the heart ; was recently blistered, and has been taking acid and cough mixtures. (Had some castor oil and

Tr. sennæ.—Milk diet. He next took pills of calomel and colocynth. to the extent of nine grains of the former, and twenty-four of the latter; and, finally, at 6 P. M., a purgative enema; effervescing draughts, and abdomen fomented.)

16th.—Physic operated, but not until he had received the injection, when two scanty and scybalous stools were procured. The vomiting continues as severe as yesterday, and he has spit a considerable quantity of blood and purulent matter. Pulse quick, but of natural strength; says the opium has never agreed with him. (Cont. pil. coloc. et calomel. Repet. enema si opus sit. Utat. potu ex potass. supertart. et Habeat h. s. extr. hyocyam. gr. iv.—Hora 6 P. M. Applic. episp. part. abdom. dolenti.)

17th.—The enema operated, and two scanty stools were procured. Spitting of blood much diminished, as also the vomiting; rested well during the night; says there is no pain in any part of his body, but that he feels as if a fluid moved through his lungs. (Cont. medic. ut heri.)

18th.—Had four stools, the last of which were not scybalous; some vomiting in the morning; expectoration of blood continues; feels pains in the right side; strength much failed, and the pulse is weak and small. (Cont. omnia ut heri, et hab. quoque lac ammoniac.)

19th.—Has very little vomiting or spitting of blood; is inclined to be costive; pulse pretty natural; blister discharges considerably; takes no food. (Repet. omnia.)

20th.—Has often a gulping of bilious matter from the stomach; but there is now very little spitting of blood, and no pains. General symptoms somewhat alleviated. (Cont. omnia.)

21st.—Great oppression and burning pain in the chest; bloody and purulent expectoration nearly ceased; little cough; is extremely weak; pulse irregular, slow; Had four stools.

22d.—Complains of soreness all over his body; all symptoms ceased; much stifling in the chest; died in the night. He took wine to the amount of several ounces during the last days of his illness.

Sectio Cadaveris.—Thorax.—The cavities of the *pleura* contained about $2\frac{1}{2}$ pints serosity, the right more than the left; slight adhesions in the right side anteriorly. The lungs contained a considerable quantity of mucosity. On opening the pericardium, the entire serous surface was covered with a layer of coagulable lymph, and long slender adhesions united it to the heart: the part of it investing the heart itself was studded with small prominent bodies, giving to the finger a sensation as if drawn over sandpaper. The serosity contained was not great. The heart itself was larger than usual; and the left ventricle possessed a thickness of substance which might be called morbid. In the cavity of the abdomen, the liver was found to be of a large size; but nothing very remarkable was observed in any of the other viscera.

1st. The difficulty in the diagnostic of pericarditis is allowed to be great; yet perhaps, with care, the disease, for the most part, might be detected at its commencement. In the cases I have witnessed, amounting to five, vomiting was universally present, and the patient could not lie with ease on his back. These symptoms have been observed by so many others, that I should deem the concomitancy of vomiting, with symptoms of inflammation within the cavity of the chest, as a decisive indication of the nature of the case. The most dangerous error which can be committed is the confounding pericarditis with typhus fever or hepatitis. The treatment by such stimulants as wine and opium hurries the patient rapidly to an untimely grave; whilst the extreme abuse of calomel in hepatic cases, proves no less destructive when the disease is mistaken for hepatitis. Should the disease be mistaken for pleuritis, as indeed they are often combined, the patient's chance of recovery would necessarily be diminished; for no one would venture to employ depleting measures to that extent, which a knowledge of the presence of pericarditis would warrant. I differ, therefore, from the learned author of the article "*Pericardite*," in the "*Dictionnaire des Sciences Medicales*," who seems to

consider it of little import though the disease be mistaken for pleuritis, as the treatment would necessarily be similar in either case. But every British practitioner, I imagine, would, on ascertaining the existence of so very alarming a disease as inflammation of the pericardium, adopt measures much more active than those generally resorted to in a common pleuritic case: He would carry venesection to the utmost possible extent; and would employ large vesicatories, which, from the vicinity of the organ affected to the surface, would materially contribute in arresting the progress of the disease.*

2d. A very careful inquiry into the nature of pericarditis has disposed me to adopt the opinion, that no one ever survived, for any length of time, an inflammation of the pericardium, whether acute, subacute, or chronic. As this opinion is in direct opposition to that of some very distinguished authors, I shall here briefly endeavour to show the grounds on which the conclusion has been adopted. The only proof hitherto offered, so far as I know, of a person having survived the effects of an inflamed pericardium, are drawn from the appearance of adhesion of this membrane to the surface of the heart, which have presented themselves when no previous symptom led to the belief that the person had laboured under any disease of that organ for at least a great number of years. But many cases are on record, in which the pericardium was found adhering to the surface of the heart, though, during no period of the patient's life, was he known to have been afflicted with disease of any organ contained within the cavity of the thorax. I find amongst my notes two such cases, in which, after the very sudden death of the patient, who had previously for many years enjoyed perfect health, no morbid appearance was found excepting the adhesion of the pericardium to the heart. It is also somewhat remarkable, that in neither of these cases had the patient ever been known to be affected with any disease referable to the chest. We shall presently consider the connexion between the morbid appearance found, and their sudden death. A few cases might be quoted from Morgagni, and other equally respectable authors, confirmatory of this pathological fact; and a distinguished modern anatomist and pathologist (Laennec) allows, that he has repeatedly met with such cases. "*Il a ouvert un grand nombre de sujets qui ne s'étaient jamais plaints d'aucun trouble dans la respiration ou la circulation; ou qui n'avaient présenté aucun signe semblable dans leur maladie, quoiqu'il y eut adhérence intime et totale des poumons et du cœur.*" It would seem, then, that the adhesions observed between the serous surfaces of the pericardium are of very different natures; that in the first, where coagulable lymph is effused, inflammation more or less acute is present; purulent matter generally appears, and the disease is necessarily fatal. On the other hand, the pericardium, without any alteration of structure, occasionally adheres to the heart by a short cellular texture, and without any accompanying or preceding inflammation, as we often find takes place in the pleura. The patient suffers little or no inconvenience, *but is apt to die suddenly at a period more or less remote.* This is an important fact, hitherto unobserved, so far as I know; and whether satisfactorily proved or not, merits the attention of the pathological anatomist.

It is well known that, in the phlegmasiæ of serous membranes, the formation of adhesions generally succeeds in arresting the farther progress of the disease, and gives to the patient an additional chance of recovery. The forming of adhesions between the serous surfaces of the heart would be accompanied with the same beneficial effects as in the phlegmasiæ of other serous membranes, were it not for the nature of the organ which it protects, its perpetual activity, and for the circumstance of its being the very source of life. In cases of pericarditis, even previous to the formation of adhesions, the disease has already committed ravages on the constitution, has destroyed the delicacy of the membrane, and altered its natural texture. It then becomes

* For a very instructive case of pericarditis, mistaken for rheumatism, see Pelletan's Surgical Works. The patient was the celebrated Mirabeau.

much thickened, dense, and inelastic; its smooth internal surface is altered; considerable masses of coagulable lymph have been deposited, existing either loose in the cavity, or forming the bond of union betwixt the diseased surfaces of the pericardium. All analogy points out that we must not strictly apply the pathology of other organs to the heart; and we have seen, in the distressing case of M., that the disease will destroy the strongest frame, though purulent matter be not effused into the cavity of the pericardium, and the otherwise favourable circumstance of adhesions have taken place, without averting, or in the smallest degree delaying, the period of the fatal catastrophe.

3d. Were we in possession of all the details relative to those cases where the pericardium has been found adhering to the surface of the heart, in persons who, during life, had never complained of any pectoral disease, we should probably find that such adhesions as those I allude to, which are neither accompanied by, nor preceded by, inflammation of this membrane, are, from the nature of the organ whose function they interfere with, attended by the sudden death of the patient. This would seem to be confirmed by two cases met with in Morgagni (Ep. 5—19. & Ep. 8—6.); and probably patient research into the *fasti* of medicine might produce evidence sufficient to establish this opinion, which I must consider as one of considerable importance with a reference to *legal medicine*.

I shall conclude these brief remarks by summing up, in a condensed form, results drawn from numerous dissections of diseased bodies, altogether independent of medical theory or hypothesis; their refutation or confirmation, by an appeal to the same source of knowledge, will afford me equal pleasure. 1mo. Hitherto inflammation of the pericardium has been almost uniformly mistaken for that of some other organ, or, unhappily, for some other disease of a totally different nature; hence those enjoying extensive practice, either in private life or public hospitals, should direct their particular attention towards investigating this disease. 2do. Inflammation of the pericardium, which has advanced so far as to form adhesions betwixt its surfaces, or to pour out coagulable lymph or purulent matter into its cavity, is uniformly and necessarily fatal. 3tio. Adhesions which, on other inflamed serous surfaces, limit the progress of the inflammation, and rescue the patient from immediate death, are of temporary benefit only in cases of inflamed pericardium, and do not ultimately save the individual. 4to. Adhesions are formed between the serous surfaces of the pleura, pericardium and peritoneum, without inflammation, and without the previous effusion of coagulable lymph.* When an adhesion of this nature unites the serous surfaces of the pericardium, it is very extensive, most commonly uniting the entire surfaces. To suppose that this was formed by the agency of any inflammatory process, involves the further supposition that a patient could possibly survive such an inflammation, and that it might have run its course without the production of any very obvious symptoms in the sufferer; suppositions which no pathologist would venture seriously to defend. 5to. These adhesions, when they affect the pleura and peritoneum, are of little consequence unless very extensive; but, when they regard the pericardium, they must necessarily affect the motion of the heart, and seem to be productive of sudden death (without any preceding illness), at a period sometimes very remote from the time of their formation.

Ed. Med. and Surg. Journ. No. lxxix. p. 566—8, & 570—3.

Black pepper in Intermittent Fevers.

In the 32d number of the *Journal Complémentaire du Dictionnaire des Sciences Médicales*, Dr. Louis Frank, privy counsellor and principal physician to her

* It is not improbable that, at some future period, a connexion may be traced between such cases and those in which the surfaces of the pericardium have been found totally destitute of moisture.

majesty Maria, dutchess of Parma, has published a summary of his experience of the remedial powers of *black pepper*, in some varieties of intermittent fevers. He states, that he accidentally came to the knowledge of the febrifuge powers of this substance. He had a patient sick with tertian fever, which resisted the most energetic employment of bark, opium, ammonia, &c. Being informed one day, that his patient had got rid of his disease, he ascertained, on inquiry, that some person out of the profession had advised him to swallow from five to ten berries of the black pepper, twice a day; and that, by following this advice, he had cured himself speedily. Dr. Frank, deriving the hint from this case, suggested the employment of pepper in intermittent fevers to Dr. Ghigini, the court physician, who very soon cured ten patients by it. In consequence of this success, Dr. Frank began to use pepper in all the cases that came under his care; and, out of seventy patients, fifty-four were completely cured within a week or so, without relapse. The mode in which he gave the pepper, was to dip the seeds into mucilage of gum arabic, and afterwards into some powdered colomba to disguise it, and then to administer them as pills. The dose is from five to eight pills, twice a day. None of his patients required more than from 70 to 80 pills for perfect recovery.

Mustard Seed in Asthma.

In the Medico-Chirurgical Journal for April, 1819, Baron Brady states that he cured himself of an asthmatic complaint of 21 years standing, by the internal use of mustard seed, of which he took every morning and evening a tea-spoon full, in a cup of tea or broth. Dr. Pitschaft says, he has derived much advantage from the internal employment of mustard in pectoral disorders, attended with cough, and excessive mucous expectoration. Dioscorides gave mustard in agues. Pliny, the great Roman encyclopedist, says, among many other things concerning this article, "*datur suspiriosis.*"

Hufeland's Journal for June, 1822.

Inhalation of the fumes of Tar.

Dr. Crichton has lately directed the attention of the profession to the employment of inhalations of tar fumes, in phthisics. The following observations of *Pliny*, have a reference to this subject, and are, I think, highly interesting. "*Silvas eas duntaxat quæ picis resinæque gratia raduntur, utilissimus esse phthisicis aut qui longa ægitudine non recolligent vires, satis constat: et illum cœli æra plus ita quam navigationum Ægyptiam proficere, plus quam lactes herbedos per montium æstiva potus.*" (Hist. Nat. lib. xxiii. cap. 6.) *Ibid.*

White Vitriol used to cure Polypus.

Dr. Pitschaft says, that he has cured two cases of polypus in a short time, by the use of a snuff composed of equal parts of white vitriol and pulv. orig. majoram. *Debruk* recommends white vitriol as a valuable remedy for polypus.

Observations on the use of the Sulphate of Quinine and Cinchonine, in Intermittent Fevers.

Dr. Chomel having obtained a large quantity of the sulphates of quinine and cinchonine from Pelletier, proceeded to try their action in intermittent fevers, under the following restrictions.

1. The medicine was used, only where the ague was quite apparent, and well characterized by its various symptoms.

2. It was used, only where nothing seemed to announce that the fever was likely soon to disappear of its own accord.

2. It was given, only in cases where the paroxysms had occurred, at least twice or three times after the admission of the patient into the hospital.

4. When a purgative, an emetic, or bleeding, had already been prescribed, Dr. Chomel waited to see the effects of these remedial agents upon the fever, before he administered the sulphates. In one instance, an ague was put an end to by an emetic.

5. The sulphates were given dissolved in a couple of table spoonfuls of water.

6. The first dose employed was from six to eight grains, in the majority of cases, and double that quantity in others. In more obstinate cases, the first dose was considerably larger.

7. The medicine was taken on an empty stomach, and no food was allowed till some hours afterwards.

8. The same precautions were observed with regard to the use of the sulphates, that are generally observed with respect to bark; and for the most part, the patients drank a solution of an acidulated syrup in the course of the day.

Dr. Chomel next relates the different cases of intermittent fever, in which he administered the new medicine. These were thirteen in number, ten of which were cured, two slightly relieved, and the third remained as before. Of the ten cases cured by the sulphate of quinine, five were cured by the first, and five after the second dose. In two instances, the sulphate of quinine, employed after the use of the grey bark, seemed to act with greater energy. In the three cases in which the sulphate of quinine appeared to have no effect, the bark itself failed to give relief.

Prophylactic power of Belladonna against Scarlatina.

(From Hufeland's Journal.)

Dr. Berndt was led to the employment of belladonna as a prophylactic, in consequence of an opinion which he formed of the nature of scarlatina. Conceiving that that disease affected primarily the ganglionic nervous system, it occurred to him that to prevent the action of the contagion, it was sufficient to find out some agent which, by exciting a specific action in that system, would destroy, or at least diminish, the susceptibility for contagion, while it exerted its influence on the vital organization. The belladonna, which had been recommended before by Hahnemann, and employed by some other practitioners with the same object, appeared to him calculated to fulfil this indication; and in order to ascertain how far his theoretical speculations were founded in truth, he resolved to make some trials with the medicine, particularly the newly prepared extract.

In order to obtain accurate results, the medicine was at first tried on individuals exposed to the direct influence of scarlatina contagion, and particularly on children under the age of fifteen, who, on account of their age and more immediate and frequent intercourse with the sick, are more susceptible of

contracting the disease. The dose was regulated according to the age, &c. The following was the formula made use of:—

R. Extr ; Belladonæ rec. parat. gr. ij.
Aquæ Cinnamomi vinosæ, unc. j.

To an infant one year old, two or three drops of this solution were given morning and evening for the first few days; to one of two years, from three to four drops, and so on, augmenting the dose by one drop for every additional year, till it was carried to twelve drops, which was the maximum.

The results of these experiments were:—

1. Of 195 children, daily exposed, and to whom the belladonna was administered, there were 14 who, notwithstanding the preservative means, were attacked with scarlet fever, while the other 181 remained exempt from it.
2. From the same experiments, made with a solution of three grains of the belladonna, upon a great number of individuals equally submitted to the influence of the epidemic, it resulted that *all* were preserved from the disease.
3. The small number of children who contracted the scarlet fever notwithstanding the preservative, presented symptoms less severe than those usually observed in similar cases.

Turpentine in Intestinal Obstruction.

Dr. Kinglake* gives an account of two cases of obstinate obstruction of the bowels, in which the spirit of turpentine, manifested decidedly beneficial powers. The first case was one of extreme obstinacy; "bleeding, warm bath, blistering, lenient and brisk cathartics, with repeated clysters," were assiduously but unavailingly applied. The case appeared almost hopeless when Dr. K. was called into consultation. "Finding," says he, "on being consulted, so much unsuccessful endeavour by the most approved modes of obtaining relief, I proposed that the spirit of turpentine should be tried, and directed it in doses of two drachms, conjoined with half an ounce of castor oil, to be taken every two hours, until the bowels should be moved. The first and subsequent doses, to the number of four, remained on the stomach, when a full and complete cathartic effect was produced. No vomiting occurred after the first dose of turpentine; and, in every instance in which it was taken, it induced, to use the patient's own expression, "a constant rumbling and a very pressing sensation on the bowels." In the second case, the turpentine though given in larger doses, was less manifestly advantageous.

Mechanical Compression of the head, as a Preventive and cure in cases of Hydrocephalus.

In the London Medical and Physical Journal for October, 1821, Sir Gilbert Blane has published some highly interesting observations concerning the advantages of mechanical pressure applied to the head in certain cases of hydrocephalus. "It occurred to me," says he, "that the distention of the head and bregma (he means of course chronic hydrocephalus) is owing to a want of firmness and due resistance in the bony compages of the skull, which consequently yields to that effort of pressure, with which the brain in its growth acts on its parietes. In reasoning further on the subject, it appeared to me conformable to some of the most approved principles of physiology, that, as there is a certain degree of tension and pressure necessary to the sound condition and action of parts, the withdrawing of this, by inviting afflux and con-

* Lond. Medical and Physical Journal, No. 271.

gestion, produces serous effusion; and, for the like reason, there may be a deficiency of that interstitial absorption, upon which the healthy state of this and all other parts of the living frame depends." From reflections of this kind, he determined to employ mechanical pressure in cases of chronic hydrocephalus, and it was not long before he had an opportunity of putting this practice into effect. "A child aged thirteen months, had a head of a preternatural size almost from birth, and the bregma was preternaturally large. The conformation of the child was otherwise defective; for there was a visible curvature of the spine, indicating a rachitic diathesis. He had for several months been subject to drowsiness; and latterly, it was evident from his screaming, and from raising his hand to his head, that there were occasional paroxysms of headach. There had also been for some time past a dilatation of the pupils. The functions of the bowels were not so much disordered as is generally the case in this disease, which was still in an unformed state.

"I directed the head to be swathed with a roller, as tight as could be done, without producing pain or uneasiness. The only other remedies were three leeches, applied once only to the temples and forehead, and a purge every two days of rhubarb and sulphate of potash. An immediate amendment took place, which continued, so that all complaint was removed in less than three months, except the curvature of the spine; and he has continued well till now, that is, for eighteen months." May not all this advantage be ascribed to the purging with *rhubarb and sulphate of potash* every other day? We should calculate upon beneficial results from such a course of laxatives in an affection of this kind, without any mechanical pressure applied to the head. The reasons, however, which Dr. B. offers for this practice, are consistent with correct physiological principles, and there can scarcely be a doubt, that at least some useful influence is to be justly ascribed to pressure in such cases. He speaks of other cases in which this practice was attended with success.

Ligatures on the Extremities recommended in certain Diseases.

Dr. Franz, of Lissa, in Bohemia, details the case of a young woman, of seventeen years of age, who complained of a difficult, interrupted, and hurried respiration; accompanied also with pain, shooting through the region of the heart, which prevented the possibility of a profound or lengthened inspiration. The countenance was very florid, and slightly tumefied; the pulse small, hard, and contracted; the artery felt stretched as a cord. Dr. F. prescribed tonics, with musk, and other antispasmodics; and the warm bath, with antispasmodic enemata, without any advantage. He afterwards had recourse to the application of ligatures upon the extremities, as they are recommended by J. P. Frank, in his chapter "*de spirandi difficultate*," in nervous habits. "*Ligatura supra cubitum et genu injecta mirabile hinc inde levamen attulit.*" They were accordingly applied above both knees, and above the left elbow. The relief produced was both instantaneous and complete. The respiration and the pulse became freer, softer, and more tranquil; the flush in the countenance disappeared, and she was enabled to leave her bed. The ligatures were applied during three hours, when the pain and swelling which they occasioned required their removal. As soon as they were relaxed (especially the one on the left arm), the spasms of the chest returned. They were again applied, and the relief was as immediate as before. Those upon the lower extremities were afterwards removed, and that on the arm retained for some time, and relaxed at intervals. There was no return of the disease, and the patient rapidly recovered.

Dr. Franz found the same method successful in a similar case which subsequently came under his care; no other treatment was employed at the same time in either instance.

The symptoms detailed by Dr. Franz would appear, in our opinion, to have

required blood-letting. Did not the ligatures, however, operate in a somewhat similar manner,—namely, by intercepting the return of blood to the heart, and thereby allowing that organ to overcome the distention of its cavities and neighbouring large vessels, which had previously existed, and which most probably had been the cause of the symptoms described? The relaxation of all the ligatures, if not gradually performed, would occasion, by the sudden and overwhelming flow of blood to the right side of the heart, a recurrence of the symptoms, which were merely the efforts of that organ to relieve itself, accompanied with those signs of irritation and spasm which are generally the concomitants of action induced in any part beyond its natural functions.

We would recommend the same method, as deserving of a trial in similar affections; at least in such cases wherein a pathology such as that just alluded to may be presumed to exist.

Lon. Med. Repos. No. 97, p. 86.

Yellow Fever.

Dr. James Johnson, editor of the London Medico-Chirurgical Journal, has published the following letter on the subject of yellow fever.

Spring Gardens, Oct. 8.

SIR,—At a time when a most fatal pestilence is ravaging the southern coast of Spain, and exciting such terror in the neighbouring states as to induce them to put in force the most rigid quarantine discipline, it may not be uninteresting to the British public to know that a countryman of their own, the veteran Dr. Jackson, now, I believe, on the verge of seventy, went voluntarily, and at his own expense, last year (1820), to the scene of this fever's devastations, in order to ascertain whether or not it was contagious, and what were the most effectual modes of treatment. He has just published a volume, containing very curious and important observations on this dreaded epidemic. It is a consolation to know that this very able and experienced physician has proved, very satisfactorily, that the disease is of a local origin; that it never was imported into those countries where it now rages; nor is it possible, almost, that it should ever be transported thence to any distance among the states in its vicinity. Popular prejudice having assigned the disease a foreign origin, popular terror has clothed it in properties of the most virulent contagion; and this last error has so divested the people of common humanity, that not only are the sick and wounded abandoned to their fate, but those who fly to the open country or mountains, (where, in fact, the malady cannot exist, much less propagate itself,) are treated like contaminated deserters from a pest-hospital, and either left to starve or put to death by their barbarous countrymen. It is consoling, however, to be certain (and it is most certain,) that a few weeks more,—that is, the approach of cold weather,—will cut off the sources of the epidemic, (which could not be the case were it a common contagion,) and thus annihilate, at least for a season, the disease itself.

In proof that the disease is not personally contagious, Dr. Jackson brings forward the following, among other authentic facts:—"In the year 1800, when upwards of ten thousand people died at Xeres de la Frontera, sixty persons were employed to bury the dead. The buriers entered the houses where the dead lay,—took the bodies in their arms, often, it is presumed, in a loathsome state,—put them into the carts in heaps, and drove them to the place of interment. None of the buriers were infected." A somewhat similar event happened in the year 1819, at Saint Lucar. The buriers of the dead having shamefully abused their office, the friars of the Franciscan convent most nobly volunteered the interment themselves. "The offer," says Dr. Jackson, "was accepted; and the friars, on entering on the duty they had thus imposed upon themselves, found the majority of the houses, or sick apartments, deserted, the bodies of the dead lying in various postures upon beds, or on the

floors. They wrapped them in sheets, or in such other covering as presented itself in the apartment, carried them to the bier in their arms, and afterwards in the bier on their shoulders to the grave. Not one of the meritorious band was attacked by the disease." In short, from the records of the past, and the evidence of the present, there is not the least reason to doubt that the epidemic now ravaging Andalusia is of the same nature, though perhaps more violent in degree, as those which have, in autumnal seasons, appeared in the same places, at longer or shorter intervals, for centuries. The poison, or malaria, which produces the disease, is the product of the soil itself, elicited by particular seasons; and the fever so generated, if directly exported to other countries, could not there be propagated, for want of its primary pabulum.

Such is the opinion of Dr. Jackson, who visited the dying, and examined with his own hands the dead, so lately as in October, 1820. It is also the opinion of the most enlightened English and French physicians who have visited the unfortunate theatre of the pestilence. Excepting the inconvenience, no harm apparently results from the quarantine precautions adopted by the neighbouring states; but the contagion conviction, impressed on the minds of those residing in and near the sickly towns and districts, gives rise to the most deplorable events, and deprives the unhappy sufferers of all succour or consolation from even their nearest friends or relatives! The operations of nature, however, and the revolution of the seasons, will soon put a period to the ravages of the epidemic.

JAMES JOHNSON, M. D.

New Method of treating Sarcocoele, without having recourse to Extirpation of the Testicle.

M. Maunoir, of Geneva, has recently published a Memoir, entitled "*Nouvelle Methode de traiter le Sarcocèle sans avoir recours a l'Expirtation du Testicule*," pp. 27. 8vo., in which he proposes to tie the spermatic arteries with a view to diminish the bulk of the diseased testicles by determining the blood distributed to them into other channels. For this purpose, he makes an incision opposite the abdominal ring, to expose the spermatic chord, and to come as near as possible to the principal trunk of the spermatic artery, so as to tie it sufficiently high to interrupt the circulation of the blood through all the small branches which it sends off. We are recommended not only to avoid tying the Vas deferens, but also the spermatic veins. But before any operation is commenced, M. Maunoir says, "that it is essential to be able to determine whether the disease is a true sarcocoele, or a medullary fungus of the testicle, or of the spermatic chord—affections of greater importance than sarcocoele, with which they have but too often been confounded. In sarcocoele the tumour is generally more uniform, and more firm; its volume does not exceed twice or thrice that of the healthy testicle; the spermatic chord remains unaffected. In the medullary fungus of the testicle, the organ usually acquires a more considerable size; the body of the testicle and the epididymis becomes soft, and affords a deceptive sensation of fluctuation, which has sometimes caused the case to be mistaken for hydrocele. If the disease is far advanced, the scrotum changes colour, becomes livid, and at length ulcerates. When this happens, the chord commonly participates in the tumefaction, and in the deceptive fluctuation above mentioned. The swelling of the chord continues even up to the abdominal ring, and the abdomen cannot be pressed without causing great pain in the loins." Two cases are mentioned by M. Maunoir, in which he put in practice the new proposal. The following is the most striking:—A man, thirty-five years of age, without any assignable cause, was attacked with pain in the left testicle, which was continued along the spermatic chord, and extended to the lumbar region. A remarkable swelling also affected the testicle, and there was a deposition of fluid also in the tunica vaginalis which was punctured. The accumulation again quickly recurred, and

was evacuated twelve times successively; the testicle at the same time acquired so considerable a size, that its extirpation, which had become necessary, appeared likely to be attended with danger. M. Maunoir, on the 8th of June, 1820, tied the spermatic artery, and divided it below the ligature. On the 4th of July, the diminution of the tumour was evident. He quitted the hospital on the 20th of August, when his testicle was perfectly without pain, and not larger than the opposite one. The pain was removed by the ligature as by enchantment, and the radical cure of the hydrocele, at the same time took place. Although we are of opinion that the proposal displays considerable ingenuity, and may certainly be applicable in some instances; as there are many kinds of swellings of the testicle, it might not in some be so prudent as the complete removal of the whole disease.

Lond. Quar. Jour. For. Med. and Surg. No. xii. p. 560.

Cases of remarkable Dislocation of the Patella, communicated by Mr. L. Wheeler.

The dislocation of the patella, inwards and outwards, frequently takes place, and particularly in the latter direction, on account of the external condyle being less permanent than the internal; the following are, however, examples of a curious and more uncommon dislocation of this bone:—

Sept. 18th, 1821.—A coal-heaver fell down so as to allow both the fore and hinder wheels of an empty coal-waggon to pass over his right knee, in a direction from the inner to the outer side of the joint. He was immediately brought to St. Bartholomew's Hospital. The patella rested perpendicularly on its internal edge, and its external edge was inclined directly forwards, so that its upper surface was turned inwards, and its under or articular surface outwards; in the same way as the extended hand might rest on its ulnar edge, instead of its palm. I speak of the horizontal position of the body. The bone was placed so nearly in a perpendicular direction, that it was not easy at first to ascertain which was its upper, and which its under or articular surface, but this was distinguished by comparison with the superior surface of the opposite patella. The insertion of the vastus externus into the external edge was the only tendinous attachment which was much stretched. I reduced the dislocation suddenly, but with some difficulty, by bending the thigh very much on the pelvis, drawing downwards the flexor muscles as much as possible, and by forcibly raising the bone at the same time that I turned it in its natural direction. Some inflammation in the joint followed, but was arrested by the usual means.

The following case related by M. Combette, will be found in the *Journal Générale de Médecine* for May, 1821:—M. C., thirty years old, dislocated his patella in wrestling by a motion which he could not describe. There was a projection at the knee; the leg was permanently extended. The patella rested completely on its edge, its articular surface being turned outwards. The internal half of its circumference was fixed in the articular groove formed by the elevation of the sides of the anterior part of the condyles of the femur.

Reduction.—An assistant raised the thigh, and with one hand M. Combette bent the leg on the thigh, while, with the other, he turned the patella from within outwards. The reduction was effected in an instant, and was followed by slight swelling and weakness. Six months afterwards, in dancing, the same accident happened in a less complete degree; for the patient was able to replace the bone himself. The joint is perfectly well formed.—Another example, of the same kind of dislocation of the patella, is also related in the 64th volume of the *Journal Générale de Médecine*, p. 79. *Ibid.* p. 563.

On the principal pharmaceutical preparations having Bark for their bases. By MM. Pelletier et Caventou.

It having been demonstrated, that the active principle of cinchona resides in the alkaline bases which it contains,—and recent observations (see a preceding article in the present number of the *Intelligencer*) having shown, that in these alkaline bases consist the febrifuge properties of bark,—it must naturally follow, that those preparations of bark will be best adapted for medical purposes, in which the active principle has not only been concentrated, but freed from the admixture of heterogeneous matter, so as to render it more susceptible of absorption by the organs on which it is destined to act.

The first, and most simple preparation of bark, is its *powder*. Directions are given, in this case, to throw away the first coarse powder, and to preserve the second. This method, observe the authors before us, is highly judicious: and they have shown, that the active principle resides most in the resinoid part of cinchona, which is precisely the part that is obtained in the second powder. The portion of powder, therefore, which is obtained the last of all, must need be the most active.

The second preparation of bark is its *decoction*. When bark is subjected for a length of time to the action of boiling water, the cinchonine, combined with the kinic acid, is dissolved; though not alone, for several other substances are dissolved along with it,—such as gum, starch, and yellow colouring matter, the kinate of lime, tannin, and a portion of the red matter. With these substances also, a portion of fatty matter is generally mingled; and we see, in fact, that, on cooling a common decoction of bark, however well filtered, it soon becomes opaque, in consequence of the tannin combining with the starch, and forming a compound, insoluble in cold water,—while, at the same time, a part of the red and fatty matter is precipitated, carrying along with it a portion of the active principle, or cinchonine, which is thus wasted. In order to obviate, in some degree, these inconveniencies, the authors of the present essay recommend the employment of a much larger quantity of water than usual, in making the decoction, so as to keep the whole of the cinchonine in solution,—to filter the liquid when cold,—and to concentrate the decoction by a gentle evaporation. By these means, the preparation will be clearer,—less unpleasant to the taste,—and endowed with its full febrifuge efficacy.

With regard to the *extract* of bark, Messrs. Pelletier and Caventou observe, that the one which is obtained from the decoction, is liable to all the objections of the latter preparation; so that, in order to obviate these, it will be necessary to prepare the decoction itself in the manner already directed. Of the extract prepared by cold infusion, the authors speak very unfavourably, as containing scarcely any part of the cinchonine.—Experience in medical practice, had already pointed out the inertness of this preparation.

All the alcoholic preparations of bark contain the largest proportion of cinchonine. Physicians, therefore, observe the authors, may place their full confidence in the different tinctures of cinchona, as very energetic preparations.—The strongest alcohol should be employed in such cases.

An alkali has occasionally been prescribed in combination with the tincture of bark. In such cases, the combination of the kinic acid and cinchonine is torn asunder, and the acid unites to the alkali employed. There can, however, be no objection to the practice, as cinchonine is fully soluble in alcohol.—Not so, in regard to the aqueous decoction; for here, the presence of an alkali would infallibly precipitate the febrifuge principle, and if the liquid be ordered to be filtered afterwards, a most inert preparation would be obtained. In this respect, therefore, the formulæ 96 and 97, in Dr. Paris's *Pharmacologia*, must be considered as unchemical preparations of bark.

The addition of an acid to the decoction of bark, is, on the contrary, a proper one. Messrs. Pelletier and Caventou speak of a magnesian syrup of bark, which is clear and transparent,—but which they condemn, as an unfit prepa-

ration of that substance, because the presence of magnesia renders the cinchonine insoluble.

The same reasoning applies to the wine of bark, as to the tincture;—the stronger the former is, and the more alcohol it contains, the more active will be the preparation of cinchona.

Tartar emetic, in union with bark, which the continental physicians occasionally prescribe, does not produce vomiting. This is explained, on the principle, that the tannin combines with the oxide of antimony, and modifies the action of the latter on the stomach,—while the active principle of cinchona is set free.

The tartaric acid weakens the power of bark, by forming an insoluble salt with its cinchonine.

Medical Intelligencer, No. xxi. p. 449.

Oil of the Croton Tiglium.

Mr. W. T. Iliff, apothecary to the South London Dispensary, has published the following interesting observations on the effects of this powerful purgative.

The nuts from which this oil is extracted, were formerly known by the name of molucca grains. Serapion the younger, who wrote in the tenth century, and who was one of the earliest Arabian writers on the materia medica, mentions the croton tiglium in his work *De Simplicibus*, c. 261; and observes, “the nuts may be compared to pine nuts,” which induced Acosta to style them as such. Mons. Pomet, chief druggist to Louis XIV., who wrote about the end of the seventeenth century, states, in his *General History of Drugs*—“The Indian pine kernels are little almonds about the size of a pea, but much longer—of a disagreeable taste, attended with great acrimony, and are not easily distinguished from the palma christi seeds, when the latter are not speckled. The use of these kernels is to purge, and it is indeed one of the greatest purgatives we have, which makes it, that we ought not to meddle with them, but with great care and precaution, not venturing to administer them but to strong robust bodies, and giving at once only one, two, or three, according to the constitution of the person.” Mr. Hermans says—“The wood of the tiglia, called panava, or pavana, operates, when fresh, violently, in doses of a scruple to half a drachm—when dried and long kept, one drachm, and in smaller doses it is a sudorific.” In his *Paradisus Batavus*, the plant bearing the tyle berries is called “*ricinus arbor fructu glabro, grana tiglia, officinis dicta*.”

Mons. Lemery observes—“The ricini of tyle berries are used in medicine, and contain in them plenty of oil and salt; they purge violently all sorts of humours, and may be given in doses of gr. i. to vj. There is an oil made of them by expression after they have been well beat, called in Latin *oleum de kerva, oleum cicinum, oleum ficus infernalis*. It purges only by rubbing the stomach and belly with it. It kills the worms, cures the itch, deterges old ulcers, and allays the suffocation of the womb. These berries are brought from America, and are called in Latin *grana tiglia, tyle berries, or Indian pine kernels*, because, in shape and size, they resemble the pine kernels.” Other more modern writers mention the croton tiglium, as Murray, Lewis, &c. &c.; the latter places it as the fourth species of the *ricinus*, and observes—“The seeds are intensely hot and acrimonious, and that Geoffroy limits the dose of the oil to one drachm, which is probably an error in the press for gr. i.”

Case 1st. A gentleman, about 30, whose bowels were rather constipated, took gr^{ss}. in the form of pill, and in an hour had three copious liquid evacuations.

Case 2d. A gentleman, 35, of a plethoric habit, whose bowels were sluggish, took gr^{ss}., and in an hour gr^{ss}. more, without producing nausea, griping, or evacuations.

Case 3d. My own bowels having been constipated 70 hours, I took g^{ss}. at half past seven A. M. ; half an hour after taking the pill, felt a rumbling in the bowels, without nausea or griping ; and in 33 minutes after, had a very copious evacuation, consisting of scybalæ and water, which, in half an hour, was followed by a second.

Case 4th. A woman, naturally costive, whose bowels had not been open for eight days, took g^{ss}. at bed time, and g^{ss}. more on the following morning, which shortly after operated copiously.

Case 5th. A woman, æt. 30, whose bowels had been constipated between three and four days, took g^{ss}. every hour and half ; and, after three doses, she was well cleared out, but slightly griped.

Case 6th. A man, æt. 32, whose bowels were rather confined, and who was suffering from a violent headach in consequence of inebriation, took g^{ss}. and in ten minutes it operated copiously, and he had seven evacuations in the course of an hour and a half.

Case 7th. A woman, whose bowels were seldom opened above once or twice a week, took gⁱ. at three P. M., and in half an hour she felt considerable rumbling, and had three copious evacuations.

Case 8th was on myself ; no evacuation for four days ; had taken Extr. Colocynth. C. gr. x.—Pulv. Rhei. gr. vj.—Hyd. Sub. gr. i. ; and, 24 hours after the latter dose, no sensible effect being produced, I took g^{ss}. of the oil, which, in the course of an hour and a half, operated several times, but produced slight nausea and griping.

Case 9th. A man, æt. 21, naturally of a costive habit, whose bowels had not been relieved for seven days, took g^{ss}. at half past two P. M., and at four repeated it ; feeling a little griped, and having no evacuation at 6 P. M. I gave him gⁱ. in aq. menth. pip., and about nine, it operated copiously twice.

Case 10th. A woman, æt. 48, naturally costive ; bowels not open for six days ; took g^{ss}. at two P. M. and at eight, g^{ss} more ; the next morning, at six, had three copious evacuations.

Case 11th. A gentleman, whose bowels were torpid, took g^{ss}. at two P. M., and, at half past three, had two very copious watery evacuations, accompanied by scybalæ, and a third consisting entirely of liquid fæces.

Case 12th. A woman, whose bowels had been constipated two days, took gⁱ. at eight A. M. and in an hour had two very copious evacuations. She was suckling at the time ; and although the infant's bowels had not been open for three days, it was well purged, and neither appeared griped.

Case 13th. A man suffering from rheumatic gout, whose bowels had not been open for five days, took g^{ss}. at three P. M. and at four it operated three times without griping.

Case 14th. A girl, æt. 13, whose bowels were torpid, and had no evacuation for two days, took g^{ss}., which in the course of a few hours, had operated seven times, without producing nausea or griping.

In some of the above cases, the oil has been occasionally repeated ; and in one, after a few doses, the patient returned to his old remedies, which he finds to act much more readily than they used to do previously to his taking the oil. I think, amongst the numerous cases I have given it in, it produces nausea and griping more frequently than Mr. Marshall allows ; and a friend informs me, he gave three-fourths of a drop to a lady, who was kept in a state of sickness nearly three hours after taking it, although it operated freely by the bowels. In a case of apoplexy, nine drops were given in the course of six hours, in three-drop doses, with no avail ; and ten grains of calomel were resorted to, which acted briskly. With regard to its exhibition in cases where abdominal inflammation is present, I can say little, and I think it a question whether it be admissible : a friend, however, mentioned, that it had been given in a case of enteritis with great success, after other purgatives had failed. In cases where doses of six or ten drops have been given, the effect does not appear so satisfactory as where smaller doses have been administered ; and I am inclined to think the oil now obtained is inferior in strength to what has been pre-

viously supplied. These observations are made public, in the hope they may fall into the hands of those who have not had it in their power to obtain the oil, or thought it unworthy of a trial; and I hope a candid statement of facts may prove the remedy (although not wholly entitled to supersede others) still deserving a place in our materia medica; and by not having its beneficial effects overrated, that it may not be laid aside, like many others, which from such occurrences, have invariably been found to fail in producing the naturally anticipated result.

Lon. Med. Repos. No. 97, p. 16.

On Vaccination and Small-Pox, in a letter to the Editors of the National Intelligencer, by Patrick Macaulay, M. D. of Baltimore.

THE appearance and disappearance of epidemic diseases has, in every age and every country, engaged the attention of the most enlightened and celebrated men, and while genius has been in vain exerted to define and fix the laws which govern them, there is but little doubt, that those which regulate contagious diseases, are as immutable as the laws which govern the universe. There are few subjects of greater national importance than the prevention and extermination of contagious disorders. Among the worst of those which afflict the human race, whether we regard the subtle influence which communicates, and disseminates it through every land, its duration, and fatal march through the population of a country, the small-pox claims our first attention.

In North America, since the destructive prevalence of small-pox in the armies of the revolution, it has seldom been at any period extensively epidemic, and the discovery and propagation of vaccination has, within the past twenty years, several times entirely banished it from our shores.

The nations on the continent of Europe, most of whom it may be said were never free from this dreadful scourge since its introduction from the east, have profited more largely from the immortal discovery of Jenner than the country of his birth. Slow to adopt vaccination, yet, from the despotic character of their governments, most of them, eventually following the example of Napoleon, prohibited at once the inoculation for small-pox, and enforced vaccination, by placing it under the surveillance of the police. In these countries small-pox has become almost unknown, and the full benefit of this valuable discovery is reaped.

In England, from the condensed state of the population, and the prejudices of the people, the benevolent intentions of the government have not succeeded, since the discovery of vaccination, to repress altogether the inoculation for small-pox, and effectually eradicate it from the kingdoms. It was, however, comparatively dormant until the year 1818, when it suddenly burst forth, and presented in its career some anomalies which for a while shook the confidence of some of the first men in the preventive character of vaccination. The difficulties and doubts which presented themselves, have been dissipated by an attentive observation of the phenomena of this epidemic, and vaccination may now be said to rest, in its native land, on a surer foundation than ever.

This is a subject of great importance to the people of these United States. It is now generally known that the small-pox, very malignant in its character, was introduced into this city from Liverpool during the last autumn, and that the time having passed by when it could have been easily arrested, is now epidemic; presenting, in its career, the same anomalous, or mixed character, which has been so attentively observed and commented upon in Great Britain.

In this country, public opinion, more powerful than the dictates of kings on subjects of national importance, is very much made up from that great source of instruction and error, the press—and assuredly, in the present instance, if the public are to judge of the efficacy of vaccination, or the ge-

neral confidence which is placed in it by the faculty of this city, from the contradictory and inconsistent statements which have been lately published, in a very short time our extended empire must be ravaged by the dreadful pestilence of small-pox. Here, public opinion must elevate or destroy the character of vaccination, and it becomes every citizen, however humble his lot, to stand forth in defence of national prosperity and happiness.

In the last report addressed to Lord Sidmouth by sir Henry Hallford, the President of the Vaccine Establishment of England, will be found a summary of those events which led many to doubt the success of vaccination in that country, and a single extract will place the character of this prophylactic expedient in its proper light.

"We have received accounts from different parts of the country of numerous cases of small-pox having occurred after vaccination—and we cannot doubt that the prejudices of the people against this preventive expedient are assignable (and not altogether unreasonably, perhaps,) to this cause."

"These cases the board has been industriously employed in investigating—and though it appears that many of them rest only on hearsay evidence, and that others seem to have undergone the vaccine process imperfectly some years since, when it was less well understood, and practised less skilfully than it ought to be—yet, after every reasonable deduction, we are compelled to allow that too many still remain on undeniable proof, to leave any doubt that the pretensions of vaccination to the merit of a perfect and exclusive security in all cases against small-pox, were admitted at first rather too unreservedly. Yet the value of this important resource is not disparaged in our judgment—for, after all, these cases bear a very small proportion to the number of those who are effectually protected by it. The report of the vaccinators at the several stations of the metropolis, give only eight cases of small-pox out of nearly 67,000 vaccinated by them since the first establishment of this board—and as the small-pox has prevailed extensively in London, these persons so vaccinated, must have been frequently exposed to contagion, and consequently the protecting effect of vaccination must have been submitted to as severe a test as can be well imagined. Moreover, we have the most undoubted proofs from experience, that where vaccination has been performed perfectly, small-pox, occurring after it, is almost universally a safe disease—and though ushered in by severe symptoms, has hardly ever failed to be cut short before it had reached that period at which it becomes dangerous to life.

"This controlling power of vaccination must be admitted as next in importance to its preventive influence—and surely justifies our high estimation of the value of this great discovery."

It must be obvious to every enlightened mind, that much of the success of vaccination as a preventive expedient, depends upon the manner of conducting the process—and when we reflect for a single moment how it has been practised for many years back, both in this country and Great Britain, we must cease to wonder at the numerous instances which have of late been observed of its failure. In accordance with our experience, it is indispensable to observe the general changes which are wrought in the state of the system by the agency of this virus, to form any correct conclusion respecting its protecting powers—and even then, although positive certainty cannot be arrived at, yet we have some data to depend upon, which will not be known where it is undertaken by masters of families, nurses, quacks, and ignorant agents, sent throughout the country.

As it is very important that the community at large should be instructed as to the extent to which dependance may be placed on vaccination, we give the following positive conclusions derived from our observations, which, simple in themselves, and in accordance with natural results, have nevertheless originated some of the absurd ideas that have lately gone forth—

1st. That the agency of the vaccine virus, where it has been properly introduced into the system, is a complete preventive of small-pox in a very large majority of instances.

2d. The number of those in whose systems the susceptibility to small-pox is not at all affected, and who receive this disease in its worst form after vaccination, are in a ratio not greater than in the instances which have been lately cited of small-pox being received twice.

3d. In those instances where the susceptibility to the contagious influence of small-pox has not been entirely destroyed in the system, but where some change has been effected by the vaccination, a disease which has received the name of *varioid*, is produced—it has, so far as we have observed, been unattended by dangerous symptoms, and leaves no disfiguration.

It has been asked if this disease, called the varioid, is not a new disease, capable of extending itself by a contagious influence? The answer to this is undoubted. It is not a new disease—but a phenomena presented to us from the contagion of small-pox operating on systems in which some change has previously been produced by vaccination. This is sufficiently evidenced by the fact which we have all had the opportunity of observing, that this varioid disease produces in the unvaccinated subject, either by coming within the sphere of its influence, or by inoculation from the pustules or crusts, small-pox in its most malignant form.

We, in common with our fellow-citizens, deplore the unhappy events which have taken place in the state of North Carolina by the introduction of the small-pox from matter sent by the vaccine institution established in this city—but we protest, for the good of our common country, against its being attributed to any other than an accidental cause. For in no instance which we have observed, has the vaccine matter, either fluid or in the crust, when taken from a healthy subject, in whose system neither small-pox nor any of its modifications have manifested themselves, ever produced any other than its specific effect, nor do we believe that it ever will.

The selection of vaccine virus for the purpose of inoculation, is a circumstance of no little importance, and to insure its decided success, it is essentially necessary to attend to the following cautions, which every medical man can readily observe:

1st. That the virus be, in all instances, taken from a *healthy* subject, particularly from one whose system is not contaminated either by small-pox, lues, psora, scrophula, or cancer.

2d. That the system into which it is to be introduced, be at the time free from any *general disorder*, and from those *local affections*, especially of the *eruptive* kind, which show some depravity in the fluids of the lymphatic system.

3d. That the disease excited by the operation of the vaccine virus be general in its effects on the system, and not local or partial. It can only be known by an attentive observation of the phenomena of this disease from the 3d to the 10th day.

We are told, in Dr. Smith's circular to the public, that small-pox "intermixes with the vaccine matter by a natural and unavoidable process, and in a manner that may possibly elude the utmost care and vigilance of any person to prevent it." It has been known, almost from the first discovery of vaccination, that if matter be taken from a vaccine vesicle in a constitution where small-pox is manifest, that it will, in almost all cases, produce the variolous disease, or some of its modifications; for, by a general law of the economy, the most forcible contagion will invariably predominate; but we have in vain sought for an instance, either in the records of our art, or during the prevalence of small-pox in our city, where vaccine matter, taken from a subject in whose system no symptom of small-pox contagion has been observed to exist, in which it has ever excited the variolous disease.

If, as is plainly inferred by the circular, the contagion of small-pox is capable of influencing the vaccine virus, even in systems in which small-pox itself is not manifested, then there is no surety. Fortunately no such fact has ever been remarked at the institution in London, where small-pox has

been more prevalent at all times since its establishment, than it has been in this city of late, nor has it ever been verified by our own observation.

We disclaim all invidious or hostile feelings towards Dr. Smith, the United States agent for vaccination, and in speaking the sentiments of the faculty of this city, one object alone has been kept in view, to present their united testimony in favour of the preventive character of vaccination, and to protect it from the highly injurious consequences which are likely to flow from the publication which has recently issued from the national establishment. We would protect that which should be a national blessing, and instead of repealing the existing laws, new acts have become necessary for its preservation. Some of the states have already enacted salutary laws on this important subject, and recent events, it is to be hoped, will instruct not only each state, but each city in the union to have within itself a proper vaccine establishment. To this end the general government will no doubt give its powerful aid by supporting its own institution.

In the foregoing observations, I have given the opinions of my medical brethren of this city, and so far as my opportunity of consulting them has gone, they are united. But, before concluding, I must make some remarks on a subject more delicate, but not less important. It has been stated in the circular before alluded to, that "Jenner himself, the illustrious discoverer of vaccination, has more seriously defamed the kine pock than any other author." If a long life devoted to the perfection of a discovery which claims the homage of the world, by a minute investigation into all those causes which may lessen its utility, the result of which has been given from time to time with an increased confidence in its success—if this can constitute defamation, then truly has Jenner lived in vain.

There are other names brought forward to support the doubted efficacy of vaccination. To these I would only say, in the eloquent language of Cicero, that "time effaces comments of opinion, but it confirms the judgments of nature." What is of more momentous import, we are told that one of these gentlemen recommends and practises the old inoculation for the small-pox. When we reflect that there is scarcely an enlightened nation of Europe, at the present day, which does not punish by the severest penalties the inoculation for small-pox, with the exception of Great Britain, where, from the genius of the government, it can only constitute a misdemeanour, what shall we say of him who would revive it in a country where public opinion must take the place of law? Legislators! Citizens! I beseech you, if you would preserve your country from an ever-during pestilence, to stand forth, and by wise laws, and the force of enlightened opinion, *prohibit the inoculation for small-pox; encourage and protect vaccination.*

Baltimore, 2d Feb. 1822.

Short account of the effects and use of the Mineral Springs of Bedford county, Pennsylvania, by Dr. William Watson.

I have been requested to make a few observations, in addition to those already made by others, respecting the operation of the Bedford mineral water: and I think I am fully justified in making the following statement.

The constituent principles of the water have been ascertained, so far as the limited conveniences of a remote village could furnish the means, and its effects have been carefully noted in great variety of cases.

Shortly after drinking the water, there is an exhilaration of the spirits, with heat and some fulness of the forehead and eyes, which is terminated by slight perspiration, accompanied with increased secretion and copious discharge of urine, after which the water has a cathartic operation, and for one or two hours the patient experiences some drowsiness. Such is the common pro-

cess of operation; but there are many exceptions to this order of effects, as they may be influenced by idiosyncrasy of the system, or by disease.

After using the water for two, three, or four days, the appetite is increased in some even to voracity—the temper becomes more cheerful—the countenance vivacious, and what astonishes many, who do not know, or do not advert to the alterative effects of perspiration and purging upon the exterior, is the softness, smoothness and animated appearance of the skin; but this change is most visible in those whose place of residence subjects them to bilious affections.

It is well known to medical men, that deranged action of the liver, or morbid secretion of that viscus, has a commanding influence on the temper of such patients; hence the atrabilious are despondent, beset with melancholic forebodings, gloomy and morose—but as they lose their adust, or yellow skin, their gloom forsakes them, and they go off improved in temper and exterior.

But let us proceed to the diseases in which this water has been taken for a remedy.

1st. *Pulmonary consumption*.—In the seasons, in which I have observed the effects of this water, many cases of this disease, in its incipient states, have been removed—but in advanced stages, much mischief has been done by the imprudent use of the water. It is the prevalent opinion, that the water is highly pernicious in all cases of confirmed phthisis—I have certainly seen much injury done by drinking it in excess, but when cautiously taken, using the auxiliary means of proper diet and exercise, I have also seen many benefited; but there is no disease in which more circumspection is necessary in drinking this water, than in consumption.

2d. All these cases of pseudo-phthisis, which are derived from the liver, with chronic fever, supported by vitiated bile or other vitiated matters of the intestines, were either cured, or very considerably relieved. Acid or acrid discharges, generally hot, black, and foetid, followed the use of the water.

3d. Heat and burning sensations of the bowels, with beating and irregular motions of the abdominal muscles, form the causes enumerated in the second article; acid eructations, cardialgia, &c. were also generally cured.

4th. Dyspepsia, when caused by deranged or diminished action of the liver, was generally cured. Whether the water will be useful in the dyspepsia, accompanying hypochondriasis, or in that dyspepsia, arising from a vitiated secretion of the gastric liquor, has not been ascertained. I have had several patients under this form of disease, but their perseverance has not been sufficient to determine what might ultimately be the effect; so far, however, as the operation of laxatives relieve in such cases, they were relieved.

5th. The Bedford water, aided by the atmosphere of a very elevated situation, operated as a restorative with all applicants, who had been debilitated from the long and free use of mercury, rendered necessary in many obstinate diseases, as hepatitis, syphilis, &c.

6th. *Rheumatism*.—Acute rheumatism, of low inflammatory action, or that intermediate state of rheumatism, in which neither the acute nor chronic states are fully characterized, and incipient chronic rheumatism have been cured or relieved in all cases of application—In confirmed chronic states, and in highly acute states, I have had very few opportunities of judging; but in no case, under my observation, has the highly inflammatory been relieved; yet, in a few cases, the confirmed chronic rheumatism has been much benefited.

7th. *Piles*.—Perhaps in no other disease, has the Bedford water been so efficacious. It has cured in some of the most obstinate cases of bleeding piles, accompanied with much emaciation and jaundiced complexion.

8th. Chronic diarrhœa, with flatulence and chronic pains; a remarkable case of this kind was cured in the last season.

9th. *Cutaneous eruptions*.—Numbers affected with these loathsome complaints have been cured; particularly in such eruptions of the skin as accompany or follow venereal affections, and even after the failure of mercury.

10th. *Dysmenorrhœa, amenorrhœa, menorrhagia, and leucorrhœa*.—During the

two last seasons there were many applicants in these opposite states of diseases—some were cured, and all, as far as I had opportunities of judging, were relieved.

11th. *Dropsy*.—In the various species of dropsy many have been relieved, some cured, and some evidently injured. In this disease, as well as in consumption, the utmost circumspection is necessary—the indications in both are frequently opposite, and to use any remedy, without reference to those indications, will probably do mischief.

12th. In chronic diseases, derived from high temperature, or following bilious affections, or caused by repletion of stimulating food, or by sedentary occupations, &c. much benefit has been obtained from a course of the Bedford mineral waters.

13th. In all cases of debility, or low morbid excitement, following severe acute diseases—or consequent on the operation of medicaments sufficiently potent to remove them, these waters have had the happiest effect.

There have been several anomalous cases, not referable to any particular head, which have been cured or relieved.

Although numbers were cured, or relieved, in almost all of the diseases enumerated above, yet many went away dissatisfied, and some were certainly injured; but it is worthy of astonishment that so few were injured—the mass of the diseased visitants imagined they had come to a place of sure relief—that all they had to do was to drink the water, no matter how copiously, or in what state of a disease. Some took the water, who should not have drunk it, some drank it in such small quantities as to produce no effect, whilst the greater number swallowed it in such doses as would justify a belief that they thought the cure depended on quantity alone.

<i>Bedford Waters</i> .—15 grains of Magnesia,	} In one pint.
5 do. Iron and Sulphur,	
6 do. Calcareous Earth,	

August, 1816.

Extract of a letter from an American gentleman in Vienna, to his friend in this country, dated March, 1819.

“I have just returned from a visit to the venerable Doctor Frank of this city. This gentleman, who has held so many distinguished titles and places in almost every school of the Continent, now lives retired in one of the distant faubourgs of the town, having long since resigned his duties as public teacher or professor in the University. He still continues to practise his profession among a few select patients; and the reputation he has so justly obtained, attracts persons from all parts of the empire to Vienna, to consult him on their different cases. He allots an hour each day to these calls, and the visits of friends, or such strangers as they may choose to introduce. Although very advanced in years, he still possesses all that enthusiasm and zeal in his profession which inspired his youth. I find him constantly at his writing table; and he tells me in a few days his seventh volume of *Medical Police* will be ready for publication. I wish you could have heard the naïveté with which he related to me the origin of this work. His genius, it seems, which had early developed itself, was soon discovered by the professors of the University in which he studied. One of these, with whom he was very intimate, and a man of much talent himself, had frequently advised Frank to direct his mind to some particular subject, and publish the fruits of his labour to the world—to which the latter objected on the score of his youth, and his not knowing sufficiently what had already been done in medicine, or what new path remained for him untrodden. He had long meditated upon the causes of disease, hoping, by removing these, to increase the happiness of his fellow-mortals. Thus we see in the first development of Frank's ge-

nius, that disinterested philanthropy, which displayed itself so often in his after-life and actions. Some of these causes, he saw, were evident to the physician, and under his control; others were evident, but only under Divine influence—still others were known and removable, but neither by patient nor physician, but only by the hand of a potentate. As an instance of the latter, he related the history of a certain town, the inhabitants of which were annually afflicted with intermittent fever, owing to a quantity of marshy ground in its vicinity. This was ordered to be drained by the Prince, and the epidemic never afterwards returned. He was led by considerations of this kind to ground the plan of his work, and mentioned the subject to his friend and preceptor. Nothing remained more but to give the foundling a name; and a very judicious thought hit upon that of Medical Police. He now prosecuted his labour with great ardour and enthusiasm—consulted all works—read over and sought out all the old laws and statutes that had been framed on this head—and in the short space of two years his work was ready for the press. It was given over to a bookseller for publication—but as Frank was young and unknown, the former would not undertake to print it until he had obtained for it the sanction of one of the learned of the faculty. It was given one of these for perusal, and condemned—the manuscript and letter of the physician were sent to Frank, but he no sooner broke open the seal, and read over its contents, than he dashed it in a rage upon the floor. Picking it up a second time, and looking at the signature, he found it to be that of one high in his esteem, which so humbled him, that he now, in a fit of despair, threw the whole into the fire. This, though sufficient to damp the ardour of an ordinary mind, only encouraged Frank to new efforts. Sensible of the great importance of his subject, he knew that the fault of his first attempt lay only in the hurry with which he had carried it through. He now sat himself with redoubled vigour about his work—drew from the sources of his vast experience—called upon all the monarchs of Europe to assist him in his undertaking—availed himself with much industry of all the great libraries, and after forty years of labour, gave to the world that excellent system of Medical Police to which Europe is indebted for many of its most wise and salutary laws. Some person hearing of the work Frank had undertaken, indignantly asked, “What, Frank, who lives in the small town of —, and is not so much as professor in a University, where he may avail himself of a library?” (for Frank was at that time physician to Prince —, with \$3000 annually.) This wrought upon the mind of Frank, who now began to consider what obstacles were in his way to a professorship—it happened but a very short time after, that he was called as professor to Göttingen, to succeed to the chair vacated by the death of Dollinger. This was the more remarkable and unexpected, as Frank is a Catholic, “and the English nation, as you know, are not as tolerant as the Roman Catholics.”

After filling his station for some time with much *éclat* at Göttingen, he was called to Pavia and Mailand, where he founded anew the university and hospitals, establishing there the first clinical professorship, as he did afterwards in the schools of Vienna and Wilna, in each of which he acted as professor. Whilst at Mailand, he occupied himself with a new work, in which he considered the various states of celibacy and marriage, and the effects of these upon population: Under the first head, he was led to the consideration of celibacy among the priesthood, which he found to have been introduced as late as the seventh century, by the wicked Gregorius—the causes could not be sufficiently assigned for its introduction. This work, of course, was condemned, and never allowed to be printed.

MEDICAL INTELLIGENCE.

PHILADELPHIA MEDICAL SOCIETY.

OFFICERS FOR 1822-23.

President—P. S. PHYSICK, M. D.

Vice-Presidents— { JOSEPH PARRISH, M. D.
 { JOHN BARNES, M. D.

Corresponding Secretaries— { SAMUEL JACKSON, M. D.
 { JOHN EBERLE, M. D.

Treasurer—SAMUEL STEWART, M. D.

Orator—H. L. HODGE, M. D.

Librarian—GEO. TRESSE, M. D.

Curators— { DR. GEORGE TRESSE,
 { MR. A. DRAKE.

Library Committee— { G. B. EMERSON, M. D.
 { J. RANDOLPH, M. D.
 { J. M. STAUGHTON, M. D.

The following gentlemen were elected honorary members, during the last session.

John Burns, Surgeon, Glasgow,
John Douglas, M. D. Dublin,
Jesse Smith, M. D. Ohio,
T. W. Jones, M. D. Virginia,
Dr. Jacobs, Dublin,
Dr. Jardine, Liverpool,
Dr. Ballingall, Edinburgh,
Hibbard Hewitt, M. D. Vermont,
Thos. Wells, M. D. Columbia, S. C.
James Bates, M. D. Maine,
Amos Twitchell, M. D. Keene, N. H.
Mr John Shaw, Surgeon, London,
Mr Joseph H. Greene, do.
Julius Cloquet, Paris,

John Ramsbotham, M. D. London,
Alexander Parson, M. D. China,
P. W. Harper, M. D. Virginia,
Dr. Waring, Newport, R. I.
Dr. Dewar, Edinburgh,
Dr. Barclay, do.
Mr. Wishart, do.
John Field, M. D. Virginia,
A. Trowbridge, M. D. Watertown, N. J.
Ariel Mann, M. D. Maine,
Henry Chofpia, M. D. Hamburg,
Mr. Charles Aston Key, Surgeon, London,
John H Howard, M. D. Georgia,
G. Breschet, Paris.

The following Students of Medicine were admitted as junior members :

Connecticut—Samuel McClellan.

Pennsylvania.

Charles Innes,
Joseph Smith,
A. S. Cox,
J. H. Bradford,
Jesse Young,
Henry Wunder,
Amos Bertolette
Philip Walter,
J. M. Greene,
Joseph Kelly,
Robert Milnor,

Theo. Ashmead
Richard Greeg,
Daniel Pfeiffer,
Wm. Hahn,
W. S. Wallace,
C. B. Jaudon,
Joseph Price,
John Fraser,
George Beatty,
A. M'Dowell,
R. Heylen,

Alfred Drake,
William Gries,
Stephen Smith,
David Rutter,
Barton Evans,
James Mitchell,
Thomas Walker,
James Young,
L. P. Snowden,
S. H. Beans.

New-Jersey.

Randall Phillips,
VOL. V.

M. B. Wright,

Charles Ridgway.

Delaware.

J. F. Vaughan, James Couper, Isaac Stidham,
Jefferson Herdman.

Maryland—O. E. Marshall.

Virginia.

W. B. Duncan,	Fontaine Watson,	J. S. Epes,
H. C. Worsham,	J. Hazlewood,	W. T. Johnson,
J. W. Cropper,	G. T. Yerby,	B. H. Moyler,
J. P. Gilliam,	Matthew Page,	George Smith,
H. H. M'Guire,	W. A. Caruthers,	T. I. Harper,
George Lee,	Robert Boyd,	I. N. Buck,
George Ried,	R. B. Perry,	John Ingram.
A. Abernathy,		

N. Carolina.

M. T. Mendenhall, John Haywood, Edmund Strudwick,
Middleton Dougherty,

S. Carolina.

C. K. Ayer,	Dugald Patterson,	E. Easterling,
J. S. Inglesby,	W. I. Bobo,	S. P. Simpson,
W. P. M'Caa,	J. M. Harris,	Thomas Powe.
U. B. Clarke,	H. Thornton,	

Georgia.

J. S. Chevalier,	B. M. Morel,	J. T. Hay,
W. D. Conyers,	A. C. Hawkins,	J. S. Phillips.

Ohio—Squier Littell.

Kentucky—A. G. Smith.

Lectures delivered during the last Session.

Dr. Barnes—"Animadversions on the Restriction of the Mat. Medica."
 Dr. Harris—"Metastasis."
 Dr. Mitchell—"Medical Character and Theories of the late Dr. Rush."
 Dr. Dewees—"On some parts of Process of Generation."
 Dr. Parrish—"Fever."
 Dr. Atlee—"On Modus Operandi of Medicines."
 Dr. Colhoun—"Theory of Generation."
 Dr. Eberle—"On Fever."
 Dr. Meigs—"On some diseases of the Viscera."
 Dr. J. G. Nancrede—"On Broussais' Doctrine of Fever."
 Dr. Bond—"On the Use of Emetics."
 Dr. Bache—"Utility of Nosological Arrangements."
 Dr. Price—"Some Peculiarities of Inguinal Hernia."
 Dr. Emlen—"On the relative merits of the different operations advised for the Cure of Cataract."
 Dr. Rousseau—"The Effects of Deleterious Effluvia on the Animal Economy."

Lecturers for the next Session.

Drs. Bache, Barnes, Eberle, Stewart, Dewees, Horner, Patterson, Parrish, Emlen, T. D. Mitchell, Meigs, Rousseau, Harris, Colhoun, Lawrence, Shoemaker, McClellan, J. K. Mitchell, Bond, Randolph, Povall and Condie.

JOHN RODMAN PAUL, *Recording Sec'y.*

MEDICAL SOCIETY OF MARYLAND.

OFFICERS OF 1822-23.

President—WILLIAM DONALDSON, M. D.

Vice-Presidents— { WILLIAM W. HANDY, M. D.
 { MR. JOHN THOMPSON, of Va.

Chairman—PATRICK MACAULAY, M. D.

Orator—MR. JOHN J. BOSWELL, of Va.

Corresponding Secretary—JOHN BUCKLER, M. D.

Recording Secretary—MR. JAMES WEBSTER, Jr. of Pa.

Treasurer—BENJAMIN DICKSON, M. D.

The following gentlemen were elected honorary members.

Dr. Nicholas Chervin, Paris.

Dr. James W. Wallace, Virginia.

Tobias C. Zollickoffer, Switzerland.

Baily Washington, D. C.

John Eberle, Pa.

Jonathan Barber, D. C.

George M'Clellan, Pa.

George Lewis, Md.

John Stitt, Pa.

Ephraim Bell, Md.

James Davis, S. Carolina.

John M. Keene, Md.

T. V. Weisenthall, Md.

— Whitridge, Md.

The following gentlemen were admitted as junior members.

Pennsylvania.

James Webster, jun.

Jesse W. Cook.

Delaware.—Thomas H. Handy.

Maryland.

James Tanner,

Isaac Hulse,

I. Y. Dashiell,

Michael Powers.

District of Columbia.—James S. Owens.

Virginia.

Richard G. Banks,

Robert Johnston,

David M'Caw,

John Thompson,

Lewis Shanks,

Samuel Gordon,

John J. Boswell,

George S. Gibson,

Hugh M. G. Kent,

George W. Perkinson,

James Williams,

Mississippi.

John Walton,

George Ross.

Lectures delivered during the last Session.

1821, Dec. 21st. Dr. John Buckler, "Digestion."

1822, Jan. 4th. Dr. George Frick, "On the Senses."

Jan. 18th. Dr. P. Macaulay, "On the practice of Bloodletting in ancient and modern times, with a defence of Dr. Rush, as its successful reviver."

Jan. 31st. Dr. Ezra Gillingham, "On the powers of life."

Feb. 14th. Dr. H. G. Jameson, "On the Circulation."

Feb. 28th. Dr. S. K. Jennings, "On the Function of the Skin."

List of Lecturers for Session 1822-23.

Samuel K. Jennings, sen. M. D., P. Macaulay, M. D., George Frick, M. D., John Buckler, M. D., Ezra Gillingham, M. D., H. G. Jameson, M. D., John D. Readell, M. D., Mr. H. H. Hayden, Benjamin Dickson, M. D., Maxwell M'Dowell, M. D., William Donaldson, M. D., William W. Handy, M. D.

By Order,

P. MACAULAY, *Chairman.*

JOHN B. RUTLEDGE, *Sec'y.*

MEDICAL SOCIETY OF BALTIMORE.

OFFICERS FOR 1822-23.

President—SAMUEL K. JENNINGS, *Scnt. M. D.**Vice-President*—WILLIAM J. WALLER.*Recording Sec'y.*—R. J. MUSGROVE.*Corresponding Sec'y.*—GEORGE HARRIS.*Treasurer*—JOHN FONERDON.*Censor*—JESSE WARFIELD.

Standing Committee—
 { GEORGE HARRIS,
 W. D. M'GILL,
 THEODORE MYERS.

Examining Committee—
 { GEORGE HARRIS
 JAMES OWENS,
 WILLIAM J. WALLER,
 W. D. M'GILL,
 THEODORE MYERS,
 JOHN FONERDON,
 WILLIAM SOMERVILLE.

Orator—WILLIAM J. WALLER.

UNIVERSITY OF THE STATE OF NEW-YORK

At a meeting of the Regents of the University, held at Albany, on the 11th January last, the following promotions and appointments were made in the College of Physicians and Surgeons in the city of New-York.

WRIGHT POST, M. D. President, in the room of SAMUEL BARD, M. D. deceased.

DAVID HOSACK, M. D. Vice-President, in the room of WRIGHT POST, M. D.

JACOB DYCKMAN, M. D. and JOHN B. BECK, M. D. Trustees.

At a subsequent meeting of the Regents, the following appointment was made in the College of Physicians and Surgeons of the Western District :

JAMES M'NAUGHTON, M. D. Professor of Anatomy and Physiology, in the room of DELOS WHITE, M. D. resigned.

UNIVERSITY OF THE STATE OF NEW-YORK

College of Physicians and Surgeons, City of New-York.

Professors, agreeably to the ordinance of the Honourable the Regents of the University, February, 1822.

WRIGHT POST, M. D. President and Professor of Anatomy and Physiology.

DAVID HOSACK, M. D. F. R. S. Vice-President and Professor of the Institutes and Practice of Medicine.

WILLIAM J. MACNEVEN, M. D. Professor of Chemistry.

SAMUEL L. MITCHILL, M. D. Professor of Materia Medica and Botany.

WILLIAM HAMERSLEY, M. D. Professor of Clinical Practice.

VALENTINE MOTT, M. D. Professor of Surgery.

JOHN W. FRANCIS, M. D. Professor of Obstetrics and the Diseases of Women and Children.

UNIVERSITY OF THE STATE OF NEW-YORK.

College of Physicians and Surgeons of the Western District of the State of New-York.—Established at Fairfield, (Herkimer county.)

From a circular which has just reached us, we are happy to learn that this institution is in a prosperous condition. Sixty-two students have attended the medical lectures during the past winter, being a larger number, we believe, than that of any preceding year. From its connection with the University of the state, the decided disposition to patronize it, which the Regents have lately evinced, and from the character and talents of the professors, we augur very favourably of the ultimate success of this establishment.

The officers of the college are,

HON. JOSEPH WHITE, M. D. President and Professor of Surgery.

WESTEL WILLOUGHBY, M. D. Professor of Obstetrics.

JAMES HADLEY, M. D. Professor of Chemistry and Materia Medica.

T. ROMEYN BECK, M. D. Professor of the Theory and Practice of Physic and of Medical Jurisprudence.

JAMES M'NAUGHTON, M. D. Professor of Anatomy and Physiology.

At the late Annual Commencement held in this College, the degree of Doctor of Medicine was conferred on the following gentlemen, who had respectively attended two complete courses of lectures, and exhibited and defended a thesis, viz.

Martin L. Bryan, Fairfield, Herkimer co.	Lester Holt, jun. Otsego co.
Alexander Burnside, York, U. C.	Eber W. Hubbard, Jefferson co.
Samuel Foot, jun. Chautauque co.	James W. Miller, Montgomery co.
Hezekiah Gates, Oneida co.	Daniel D. Page, Oneida co.
Lester Green, do.	Jared H. Parker, Onondaga co.
Reuben H. Hart, Saratoga co.	Elisha Powell, jun. Saratoga co.
	Solomon P. Sherwood, Middlebury, Vt.

UNIVERSITY OF PENNSYLVANIA.

At a Public Commencement held in the Hall of the University of Pennsylvania on Thursday, the 4th day of April, 1822, the following gentlemen received the degree of Doctor of Medicine.

Maine.

John Hubbard, On Absorption.

Massachusetts.

Jonas Green, Necrosis.

New-Jersey.

John Marshall Paul, Effects of Contusion on the Bladder.	Wm. Bacon, Cold Applications.
Charles Garrison, Cholera Morbus.	Matthew Pryor, Pertussis.
Isaac S. Mulford, Connexion of Scrofula and Tubercular Consumption.	John A. Elkington, Anomalous Diseases of the Rectum, &c.
Randall H. Phillips, Cholera Infantum.	Benj. Fisler, Jr. Dysentery.

Pennsylvania.

Daniel Theodore Coxe, On the Conversion of Diseases.	Edward V. Howell, Cholera Infantum.
Edmund Lewis Dubarry, Wounds of the Joints.	Amos G. Mathias, Trachitis.
	Wm. Buskirk Hahn, Chorea Sancti Viti.

Thomas Hendry Ritchie, Artificial Pupil.

J. Townsend Sharpless, Typhoid Bilious Fever.

James Kitchen, jr., Indigestion.

Samuel M. Fox, Varicose Ulcers.

Benj. Sandford, jr., Circulation of the Blood.

Nicholas B. Lane, Epidemic of Franklin Co. Pa. 1821.

Samuel Barrington, Arsenic.

Benj. Ellis, Marsh Effluvia.

John O. Wagener, Hydrocephalus.

John Heysham Gibbon, Causes and Prevention of Drunkenness.

Robert Milnor, Absorption of Medicines.

John Uhler, jr., Intermittent.

Wm. Barnwell, jr. Tropical Dysentery.

Robt. May, Ophthalmia.

Saml. M'Cleane, Scrofula.

Henry Merivale Tucker, Asthma Convulsivum.

Theodore Ashmead, Tetanus.

Samuel Jones, Fever of Philadelphia in 1820.

Delaware.

Thomas M. Stout, Rheumatism.

Maryland.

Wm. P. Williams, Croup.

Robt. Aloysius Durkee, De Cubebain Gonorrhœa.

Virginia.

George Smith, Puerperal Convulsions.
Augustine Abernathy, Cholera Infantum.

Benj. Henry Moyler, Gastritis.

Solomon Mordecai, Phthisis Pulmonalis.

Gilley Marion Lewis, Melia Azedarach.

Hugh Holmes M'Guire, Tetanus.

Landon B. Cabell, Hydrothorax.

George W. Morriss, Gonorrhœa.

James Cooke, Fever of Fredericksburgh, 1821.

John C. Taliaferro, Rest and Position as Remedies.

Thomas P. Hoge, Hæmorrhoids.

Wm. W. Fennell, Causes of the Vacuity of Arteries.

John Ker, Amenorrhœa.

Edmund Berkeley, Dyspepsia.

Mann P. Nelson, Cholera Infantum.

Francis A. Wilson, Hydrothorax.

Richard B. Perry, Hydrocele.

Fontaine Watson, Pneumonia.

George Lee, Calculous Affections.

Southy S. Satchell, Anasarca.

James Spencer, Cynanche Maligna.

Alexander G. Strachan, Hydrocele.

Francis Lightfoot Lee, Hydrothorax.

Robert D. Starke, Rheumatism.

North Carolina.

Nathan Turner, Pneumonia.

Thomas L. Carthy, Lithiasis.

Philip H. Thomas, Hæmorrhoids.

Thomas J. Faddis, Cholera Infantum.

Levin B. Lane, Cynanche Trachealis.

Major A. Wilcox, Hepatitis.

South Carolina.

John Haslett, Inflammation.

Shubel Blanding, Morbus Coxarius.

Francis Orlando Curtis, Intermittent.

Dugald Patterson, Acute Hepatitis.

Moses Quarles, Syphiloid Disease.

Georgia.

John D. Swift, Hemeralopia,

Alexander Jones, Melia Azedarach.

John Jordan, Dyspepsia.

Wm. Rainey, Bilious Fever.

District of Columbia.

Ezra Stiles Meigs, Hypochondriasis.

Great Britain.

George A. W. Oldmixon, Nux Vomica.

JOHN REDMAN COXE,

Dean of the Medical Faculty.

Annual commencement of the College of Physicians and Surgeons, City of New-York.

Agreeably to an ordinance of the Honourable the Regents of the University of New-York, the public commencement was held in the hall of the College of Physicians and Surgeons, in the city of New-York, on the second day of April, 1822, when the following gentlemen were admitted to the degree of Doctor of Medicine, after having complied with the statutes of the University, and defended their respective Inaugural Dissertations.

Nova-Scotia.

Ebenezer Fitz Harding, on the Management of the Placenta.

Connecticut.

Rufus Blakeman, on Melancholia.
Henry Palmer, on Dropsey.

Stephen Middlebrook, on Puerperal Fever.

New-York.

Samuel Borrowe, jr. on Iritis.
John P. Emmet, on the Chemistry of Animated Matter.
Nathan S. Jarvis, on Angina Pectoris.
Robert P. Macomber, on Menstruation.
David L. Rogers, on Carotid Aneurism.
Lewis Traver, on Hepatitis.
Andrew Van Dyck, on the Topography and Diseases of Kinderhook.

John Cadle, A. M. on Mortification.
Peter Forrester, A. B. De Morbis Artus Genu.
Ferdinand Ludlow, on Hydrophobia.
Jotham W. Post, on Diseases of the Hip Joint.
Walter S. Smith, on Emetics in Hysteria and Epilepsy.
Spencer Wood, A. B. on Hereditary Diseases.

New-Jersey.

John S. Condit, A. B. on the Lachrymal Gland.

Lewis D. Ford, on Dysentery.
Thomas L. Smith, on Cataract.

Virginia—Horace Ames, on the Phlegmasiæ.

North Carolina.

Bennet Boddie, on the Functions of the Skin.

Samuel Grier, on Hepatitis.
William H. Hunter, on Dyspepsia.

South Carolina.

William E. Ellerbe, on Urethritis.
David I. Means, on the Momordica Elaterium.
William Porcher, A. B. on the Indigenous Gentians of the U. States.

Aaron Lopez, on the Importance of Diagnosis.
Edmund C. Park, on Catarrhus Senilis.

Georgia.—Fitzgerald Bird, A. B. on the Sanguinaria Canadensis.

UNIVERSITY OF MARYLAND.

The Provost, Professors, and Regents of the University of Maryland, held a public medical Commencement in the University buildings, on Monday, the first day of April, one thousand eight hundred and twenty-two, and conferred the degree of Doctor of Medicine on the following gentlemen.

South Carolina.

Hugh M'Cann, on Tetanus.
M. W. Moon, on Bilious Intermittent and Remittent Fevers.

John B. Laborde,* de Rheumatismo.
Thomas Lining, on Dysentery.

* The GOLD MEDAL, for the best Latin thesis, was awarded to John B. Laborde, of South Carolina.

North Carolina.

Gooderum Davis, on Dyspepsia.
John H. Parker, on Cholera Infantum.
John Rodgers, on Acute Rheumatism.

Edward Bradford, on Bilious Remittent Fever.

Virginia.

John T. Baskerville, on Typhus Fever.
William H. Jameson, on Hepatitis.
R. G. Banks, Physiological Reflections.
Goodwyn H. Harper, on Diarrhoea.
Francis E. Manson, on Cynanche Trachealis.

Samuel H. Gordon, on Dyspepsia.
Henry Willis Bassett, on Odontologia.
James B. Rodgers, on Epilepsy.
John M. Daniel, on Analogical Reasoning.

Kentucky—Alexander C. Keene, on Organization.

Tennessee.

Benj. F. Robertson, on Dysentery. Thomas A. Anderson, on Amenorrhoea.

Mississippi—John Walton, on Anasarca.

Illinois.—Archibald Spring, on Phthisis Pulmonalis.

Delaware—William M'Bride Gemmell, on Cynanche Trachealis.

Pennsylvania.

Edmund H. McCabe, on Pneumonia Vera.

John M. Keagy, on the Prognosis of Diseases.

New-Hampshire.—A. R. Chamberlin, on Toxicology.

Maryland.

Henry B. Broughton, on Animal Heat.
John C. S. Monkur, *De probabilitate serici vasorum in æconomeâ anamili existentis ad aera secernendum destinata.*

James Heighe, on Mercury.

Thomas B. Hungerford, on Cynanche Trachealis.

Henry K. Webster, *de Tetano.*

H. S. Hawkins, on the Nourishment of the Fœtus.

B. Carr, on Hepatitis.

Richard Sprig Stewart, on the Action of Arteries.

John L. Yates, on Arsenic.

John B. Rutledge, on the Temperaments.

Eli Lackland, on the study of Medicine.

Robt. Mathews, on Cynanche Trachealis.

Emilius Morancy, on Small-Pox.

John M'Gill Thomas, on Gout.

Zadock H. Rosse, on Opium.

John K. B. Emory, on Dysentery.

Henry A. Slennecke, on a New Mode of Bandaging Fractured Clavicle.

Robt. T. Allen, on Phthisis Pulmonalis.

Thomas C. Kennard, on Apoplexy.

A. H. Lemmon, on Vaccination.

Walter S. Way, on Rheumatism.

H. H. Rikken, on the *Vis Musculorum Propria* of Haller.

Elijah Bond, on Syncope.

Frederick F. White, on Phrenitis.

Edward Veazey, on Puerperal Fever.

Henry Culver, on Rheumatism.

William McCaffrey, on Dropsy.

On the same day, Alexander Lowry, A. B. having passed his previous examination, received the degree of Bachelor of Medicine.

The Provost, Professors, and Regents of the University of Maryland, have conferred the Honorary Degree of Doctor of Medicine on JAMES CARMICHAEL of Fredericksburg, Va., THOMAS ROBERTSON, of Petersburg, Va., and JAMES DAVIS, of Columbia, S. C. The honorary degree of Bachelor of Medicine was conferred on DUNCAN TURNBULL, of Maryland, and MANUEL MORINO, of Buenos Ayres, South America.

JAMES KEMP, D. D. Prevost.
GRANVILLE SHARP PATTISON,
Dean of the Medical Faculty.

INSTITUTION FOR THE DISEASES OF THE EYE AND EAR.

In the Supplement to the 14th No. of this Journal* a notice was inserted respecting the formation of an institution for the relief of diseases of the eye. During the past year that charity has been conducted in the form of a dispensary, and the poor have been supplied with medicines and attendance at the expense of a few subscribers from the office of Dr. McClellan, in Swanwick-street. The operations which were performed for cataracts, &c. upon a respectable number of blind people, proved so successful, that considerable interest has been excited, and we are happy to announce that the institution has in consequence been recently extended into the form of a Hospital. We understand that more than 100 of the most influential citizens of Philadelphia have associated themselves together to support this interesting establishment, that a charter has been obtained from the Supreme Court, and Attorney-General, and, that in a few days it will go into regular operation as an organized hospital, for the relief of diseases of the Eye and Ear.

The following gentlemen have been appointed managers.

The Hon. Chief Justice TILGHMAN,	PAUL BECK, Esq.
The Right Rev. Bishop WHITE,	HON. BENJAMIN R. MORGAN,
The Hon. Judge DUNCAN,	RICHARD H. BAYARD, Esq.
JOHN H. BRINTON, Esq.	THOMAS KITTERA, Esq.
EDWARD S. BURD, Esq.	JOHN M. SCOTT, Esq.
JON. W. CONDY, Esq.	BENJAMIN TILGHMAN, Esq.
JAMES C. FISHER, Esq.	

We regret that the interesting report of cases treated by Dr. McClellan, during the last year, and the constitution and proceedings of the managers have come too late for insertion in this number of our Journal. We observe that eighteen cases of cataract were admitted; several with diseases requiring operations for artificial pupil; and that two cases of complete amaurosis have been cured by remedies administered on the same general principles that we have detailed in our analysis of Mr. Stevenson's work.

EDITORS.

We have just seen the first number of the *NEW-YORK MEDICAL AND PHYSICAL JOURNAL*. In the favourable circumstances under which this magazine is commenced, we have reason to hope that it will meet with encouraging and extensive patronage; and in the talent engaged in its support, we have a sure pledge that it will be worthy of the co-operation and approval of the profession.

* Published in April, 1821.

ERRATA.

- Page 43, line next the last, for "*mortus*" read *mortuis*.
46, 15 from top, for "*as much*" read *so much*.
47, 20 from top, for "*its*" read *their*.
48, 6 from top, for "*stimulatory*" read *sternutatory*.
51, 9 from last, for "*ane*" read *une*.
52, 16 from last, for "*have*" read *leave*.
181, 6 from top, for "*causes*" read *uses*.
183, 25 from top, for "*of the leg*" read *of apoplexy of the, &c.*
185, 1 from top, for "*Baille*" read *Baillie*.
190, 6 from top, for "*avula*" read *uvula*.
192, for "*Dr. Edward G. Howell*" read *Dr. Edward Y. Howell*.



turetion,

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A Synoptical Table of

DEDICATED TO THE OBSTETRICK CLASS IN THE

BY RICHARD WILMOT

PROFESSOR OF OBSTETRICKS AND DISEASES OF WOMEN AND CHILDREN

PARTURITION
may be classed according to the relations which exist during this process, between the fœtus and the maternal structure concerned in the function, and is either *natural* or *preternatural*.

CLASS I.
NATURAL,
Includes every case in which delivery can be effected, with safety to the mother and the child, by the unaided powers of the mother; has two Orders.

ORDER I.
Common;
includes 2 Genera.

ORDER II.
Difficult;
has 2 Genera.

ORDER I.
Manual;
requiring the hand to change the fœtal position; has 7 Genera.

ORDER II.
Instrumental;
requiring blunt or cutting instruments; has 8 Genera.

CLASS II.
PRETERNATURAL
Includes every case, which requires the aid of art to complete it with safety to the mother or child; has two Orders.

- | | |
|--|--|
| Genus I.
Vertex presenting; has 4 species. | Species 1. Vertex presenting towards the right.
Species 2. Vertex towards the right.
Species 3. Vertex to the left sacro-iliac.
Species 4. Vertex to the right sacro-iliac. |
| Genus II.
Vertex and arms presenting; has 3 species. | Species 1. Vertex with both arms presenting.
Species 2. Vertex with the right arm presenting.
Species 3. Vertex with the left arm presenting. |
| Genus I.
Breech presenting; has 4 species. | Species 1. The face of the fœtus towards the right.
Species 2. The face of the fœtus towards the left.
Species 3. The face of the fœtus towards the right.
Species 4. The face of the fœtus towards the left. |
| Genus II.
Feet or knees presenting. | Species 1. The face of the fœtus towards the right.
Species 2. The face of the fœtus towards the left.
Species 3. The face towards the right.
Species 4. The face towards the left. |
| Genus I.
Shoulder presenting. | Species 1. The right shoulder.
Species 2. The left shoulder.
Several varieties may be distinguished. |
| Genus II.
Hand & arm passing thro' the os uteri. | Species 1. The right hand and arm.
Species 2. The left hand and arm.
Varieties as above, may be distinguished. |
| Genus III.
Trunk presenting. | Species 1. The posterior aspect presenting.
Species 2. The anterior aspect presenting.
Species 3. The right lateral aspect presenting.
Species 4. The left lateral aspect presenting. |
| Genus IV.
Crown of the head presenting. | Species 1. With the occiput towards the right.
Species 2. With the occiput towards the left.
Species 3. With the occiput to the right.
Species 4. With the occiput to the left. |
| Genus V.
Occiput presenting. | Species 1. The crown of the head on the right.
Species 2. The crown of the head on the left.
Species 3. The crown of the head to the right.
Species 4. The crown of the head to the left. |
| Genus VI.
Funis presenting. | Species 1. Cord presenting and descending by the feet.
Remark—All the varieties may be distinguished by the feet. |
| Genus VII.
Face presenting. | Species 1. The forehead towards the right.
Species 2. The forehead towards the left.
Species 3. The forehead towards the right.
Species 4. The forehead towards the left.
Remark—This genus is divided into two species, and if this cannot be done, it is divided into three. |
| Genus I.
Head remaining stationary in the pelvis. | Species various, as in Genus I. and II.
Causes. { A. Uncommon situation of the head.
B. Deformity of the pelvis.
C. Defect of the powers.
D. From convulsions.
E. From hæmorrhages. |
| Genus II.
Breech stationary in the pelvis. | Species various, as in Genus I. of difficult labour. |
| Genus III.
Pelvis so vitiated, that its conjugate diameter does not equal 2½ inches. | Species as in the Genera where the fœtus is stationary.
Cause—Disease of the bones. |
| Genus IV.
Fœtal dimensions morbidly increased, while the pelvis is natural. | Species various, as in all the Genera.
Causes. { A. Hydrocephalus.
B. Hydrothorax.
C. Ascites.
D. Monstrous growth. |
| Genus V.
Pelvis vitiated, so that its conjugate diameter does not equal 1½ inches. | Species as in all the Genera.
Causes. { A. Mollities ossium.
B. Mechanical injury. |
| Genus VI.
When the os uteri cannot dilate. | Species various, as in all the Genera.
Causes. { From cartilaginous growth.
From schirrus constrictor. |
| Genus VII.
Vagina in a morbid state. | Species various, as in all the Genera.
Causes. { A. From adhesions.
B. From ligamentous growth.
C. From cicatrices. |
| Genus VIII.
Walls of the uterus ruptured. | Species various, as in all the Genera.
Causes. { A. A morbid state of the uterus.
B. Action of the uterus.
C. External mechanical force. |

of Parturition,

THE UNIVERSITY OF MARYLAND.

OT HALL, M. D.

CHILDREN IN THE UNIVERSITY OF MARYLAND.

g towards the left acetabulum of the pelvis, with the forehead to the right sacro-iliac junction.
the right acetabulum, and forehead to the left sacro-iliac junction.
t sacro-iliac junction of pelvis, and forehead towards the right acetabulum.
ht sacro-iliac junction, and forehead towards the left acetabulum.

arms presenting.
right arm.
left arm.

etus towards the left sacro-iliac junction.
etus towards the right sacro-iliac junction.
etus towards the left acetabulum.
etus towards the right acetabulum.
etus towards the right sacro-iliac junction.
etus towards the left sacro-iliac junction.
s the right acetabulum.
s the left acetabulum.

er.
eties may occur in this presentation, which need not be noted here.
nd arm.
l arm.

above, may occur.
ect presenting.
ect presenting.
aspect presenting.
spect presenting.

towards the left acetabulum.
towards the right acetabulum.
to the right sacro-iliac junction.
to the left sacro-iliac junction.

head on the right sacro-iliac junction, and the *nucha* over the left acetabulum.
head on the left sacro-iliac junction, and the *nucha* over the right acetabulum.
head to the right acetabulum, and the *nucha* against the left sacro-iliac junction.
e head to the left acetabulum, and the *nucha* against the right sacro-iliac junction.
and descending before the fœtus.

—All the above genera, species and varieties of manual labour, require *turning* and delivery

t,
wards the left acetabulum, and chin towards right sacro-iliac junction.
wards the right acetabulum, and chin towards left sacro-iliac junction.
wards the right sacro-iliac junction, and chin over the left acetabulum.
wards left sacro-iliac junction, and chin over right acetabulum.

—This genus, with its species, requires the hand and fingers to change the axis of the head,
cannot be done, to *turn*.

I. and II. of *common*, and IV. VI. and VII. of *manual* parturition.

ommon size of the fœtal head,
mity of the pelvis,
et of the Parturient power,
a convulsions,
hæmorrhage,

Requiring forceps, lever,
or fillet, which injure nei-
ther mother nor child.

I. of difficult, } Requiring blunt hooks, fingers, or fillet, which injure neither mother nor child.

ere the fœtal head is of ordinary dimensions,

Genera,
ocephalus,
othorax,
es,
trous growth of parts.

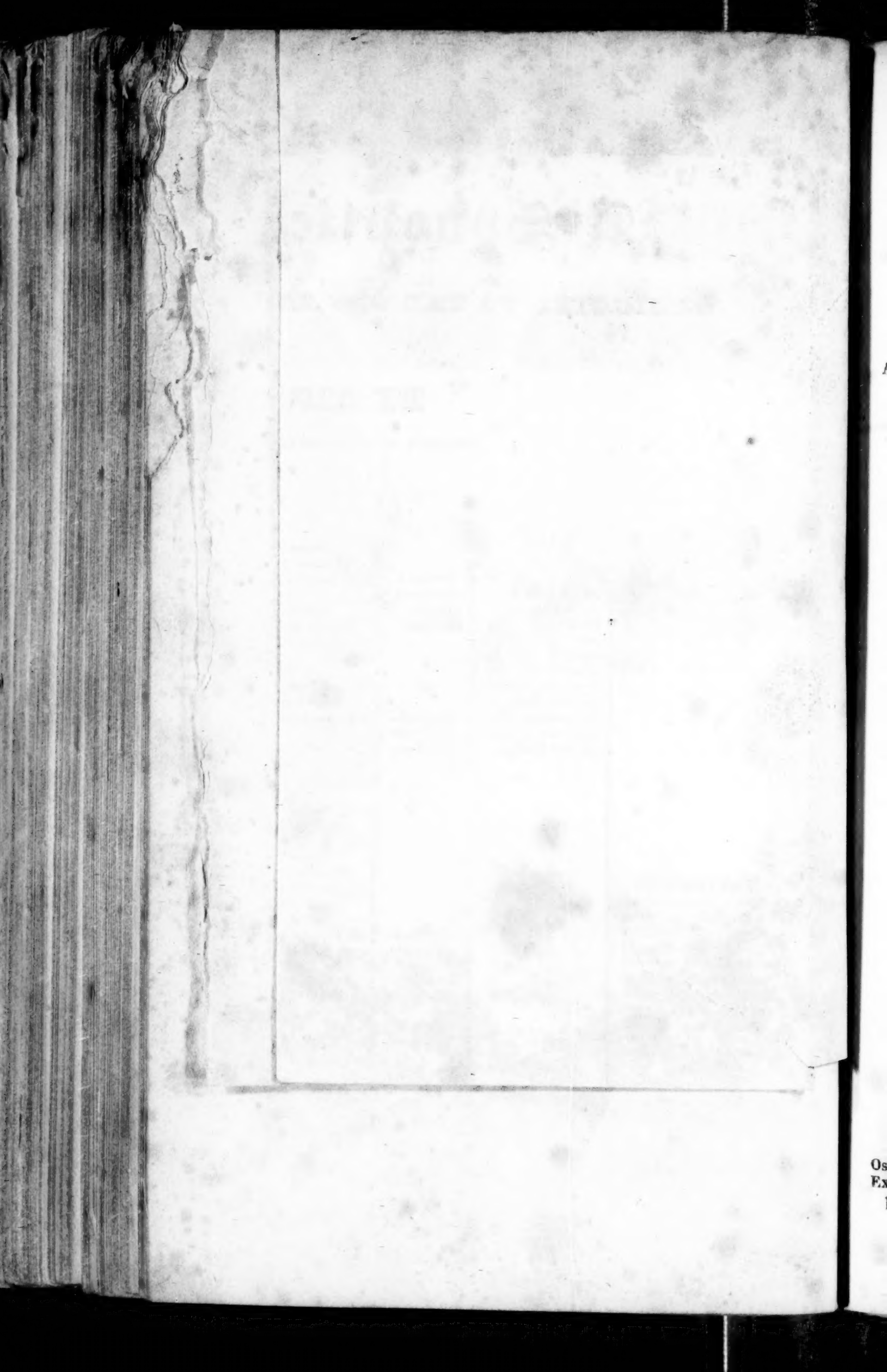
Requiring instruments to lessen the child's di-
mensions; scissors, crotchets, and hooks.

ities ossium, } Requiring the great cæsarian section through the abdominal and uterine walls.
hanical injuries,

Genera,
ilaginous deposition, } Requiring the less cæsarian section, or a division of the os uteri by
irrus condition. knife or scissors.

Genera,
adhesions of its walls, } Requiring a division of the opposing parts, and enlarge-
ligamentous growth, ment of the vagina, by the knife, &c.
cicatrices and diminution of its walls,

Genera,
rbid state of the uterine walls, } Requiring gastrotomy, or the section of the abdominal
n of the abdominal muscles, walls, to extract the fœtus.
nal mechanical injuries,



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TO READERS AND CORRESPONDENTS.

Mr. Hayden's observations on a case of Aneurism, were received too late for the present number; they shall appear in our next.

We cannot publish the review furnished us by our correspondent C. It would be in vain to point out the errors, and inconsistencies of a work, which, as a certain newspaper editor states, was praised in a review of *forty pages* in a German Journal!

Our Baltimore correspondent who sent us a review of a certain pamphlet on Sulphureous Fumigations, is informed, that we stand in no need of his advice with regard to what should or should not be inserted into the Recorder. His review is inadmissible.